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SIMPLE DEVICES FOR EFFECTIVE ARTIFICIAL RESPIRATION IN EMERGENCIES *

S. J. MELTZER, M.D., LL.D.

NEW YORK

In a preliminary note,[1] about a year ago, I described a simple method of artificial respiration which proved efficient in animals. The method consisted in driving air rhythmically by bellows through a tube which has been introduced into the pharynx. The plan of this method was based on the following considerations. Air under pressure in the pharynx has four outlets. It may escape by way of the nasopharynx through the nose. It may escape through the mouth. It may escape through the esophagus into the stomach. It may finally enter into the trachea and the lungs; when it enters there with sufficient force, it causes an inspiration. To obtain an efficient insufflation of air from the pharynx into the lungs, the other exits must be satisfactorily barricaded. In the method described under the name of pharyngeal insufflation the escape of air through the mouth was effectively reduced by pressure on the suprahyoid region. The elastic pharyngeal tube raised the soft palate and the uvula, and thus shut off the entrance into the nasopharynx. The entrance of air through the esophagus into the stomach would, besides the deviation of the air from the lungs, be an additional evil by the gastrectasis and intestinal meteorism which it may cause. All these evils were effectively met in two ways: by introducing a tube into the stomach or by putting a weight on the abdomen. When these various precautions were taken, each insufflation through the pharyngeal tube drove air into the lungs with sufficient force which caused indeed an effective inspiration. The expirations occurred during the interruptions of the insufflation, the elasticity of the chest and of the abdominal viscera driving the air out again into the pharynx from where it escaped through the least resistant passage ways, which were now through the pharyngeal tube and alongside through the unobstructed part of the mouth.

The method thus described, which worked well in four species of animals (dogs, cats, rabbits and monkeys), has since been tried on living as well as on dead human beings. Here, however, the method failed to work. In human beings pressure on the suprahyoid region does not restrict effectively the free escape of air through the mouth; neither is the entrance into the nasopharynx sufficiently blocked by the pressure of the flexible pharyngeal tube. The air insufflated into the pharynx escapes freely through the mouth and nose and enters therefore into the lungs with too little force to overcome the resisting elasticity of the lungs and the thoracic walls and thus to cause an inspiration. In other words the simple arrangement which is so efficient a method of artificial respiration for animals proved to be unsatisfactory when applied to man because of the difference in the anatomic construction. I then set out to develop the method further so as to make it applicable to human beings. I believe that I have now attained that end. In the following I shall describe two methods which have caused effective respiration (that is, effective rhythmic entrance of air into the lungs) even in human cadavers stiff in rigor mortis or frozen stiff. I shall designate the respective methods of artificial respiration as the *pharyngeal* and the *mask device*. I shall describe the pharyngeal device first and in greater detail.

The pharyngeal tube to be used in human beings is made of metal. It measures transversely 38, and vertically 27, millimeters and is about 18 centimeters long. The lower (tongue) side is flat, the upper (palate) side is round. At the pharyngeal end the upper side is longer by about four centimeters than the tongue side; when the tube is inserted through the mouth into the pharynx, the end of the upper side has to reach the posterior wall of the pharynx, while the lower side may end somewhere between the radix of the tongue and the posterior wall of the pharynx. For an adult of medium size the dimensions of the tube are sufficient to fill out the entrance into the pharynx so as to prevent the escape of air through the mouth; it also blocks reliably the entrance into the nasopharynx. Of course, tubes of various dimensions may be had at hand, so as to fit the individual sizes. The outer end of the tube carries, in the first place, a hollow neck-like projection to connect the tube with the insufflation apparatus. It has, besides, a round hole, through which a large stomach tube may be introduced into the esophagus and the stomach, when necessary; this hole is usually kept closed by a movable plate.

The outer end of the pharyngeal tube is connected by means of a short heavy piece of rubber tubing with a little device which I designate as respiratory valve. It is a small tube about 10 centimeters long and 3 centimeters in diameter, which carries a valve inside and a ring outside. By means of that ring the valve may be moved from side to side. When it is moved to the right side, it connects the insufflating apparatus with the pharyngeal tube and air or oxygen is driven into the pharynx and the lungs. When the ring is moved to the left side, the current of air or oxygen is shut off; at the same time an opening is established through which the expired air may now readily escape. The respiratory valve may be conveniently held in the hand and the ring moved from side to side by the thumb. The ring mov-

* From the Department of Physiology and Pharmacology of the Rockefeller Institute for Medical Research.

1. Meltzer, S. J.: Pharyngeal Insufflation, a Simple Method of Artificial Respiration, THE JOURNAL A. M. A., May 11, 1912.

ing the valve is not in the middle but near one end of that little device, the end which should be connected with the pharyngeal tube.

The other end of the respiratory valve should be connected by means of strong rubber tubing with glass-blower foot-bellows which should be worked so as to give an approximately continuous current of air; or it may be connected with an oxygen tank. Between the respiratory valve and the bellows (or oxygen cylinder) a "safety-valve" should be interpolated in order that the air or oxygen should not be driven into the pharynx with too high pressure. The safety-valve may be of such a simple kind as I described in the recently appeared sixth volume of Keen's work on surgery for the intratracheal insufflation apparatus. It consists simply of a calibrated tube dipping in mercury. The pressure should be arranged for not less than 20 millimeters mercury, and may be even 25 millimeters; the pharyngeal system of insufflation will always permit an escape of some air through any of the exits.

Heavy weights to be placed on the abdomen, a broad belt to reinforce the pressure on the abdomen, and a large stomach tube, about 33 French, complete the outfit.

The pharyngeal insufflation apparatus for artificial respiration consists then of a metal pharyngeal tube, the

Fig. 1.—Blood-pressure tracing from an etherized dog which received an intravenous injection of sodium nitrite. Blood-pressure low, 44 millimeters; pressure on the abdomen brings up the blood-pressure to 70 millimeters mercury, and the pulse pressure is nearly doubled in size.

respiratory valve, foot-bellows, or an oxygen tank and a safety-valve. In addition there should be on hand a tongue forceps, a stomach-tube, heavy weights and a belt. The procedure is as follows:

After a heavy weight is placed on the abdomen, the tongue should be pulled out by means of an appropriate forceps and the pharyngeal tube inserted into mouth and pharynx as far as it may go. For the sake of being in readiness, the respiratory valve should be kept attached to the pharyngeal tube. The free end of the respiratory valve should now be connected with the foot-bellows or the oxygen tank to either of which a safety-valve is attached. Now the oxygen tank should be opened, or the foot-bellows started working, while the respiratory valve is taken in the right hand and the ring moved by the thumb from side to side, keeping it for two or three seconds at each place. The same man who works the bellows with his foot may work at the same time the respiratory valve with his hand. When the ring rests at the right side, the air from the bellows or the oxygen from the tank is insufflated into the pharynx with a force of 20 millimeters of mercury and unavoidably enters the lungs, causing an inspiration. On account of the pressure on the abdomen the inspiration causes essentially distention of the thorax. When the ring is turned to the left the insufflation is cut off and the elastic recoil of the ribs and of the abdominal viscera causes an efficient expiration. The rubber tubing connecting the pharyngeal tube with the respiratory valve should be short, in order to cut off the dead space and during expiration eliminate carbon dioxid as much as possible. Rebreathing is surely undesirable. All tubing employed for connections should have thick walls to prevent kinking. The tongue should be kept pulled out in order to keep the epiglottis raised. After the pharyngeal tube is inserted the tongue may be kept in proper position by tying it (not too tight) to the tube; the forceps may be then taken off. The tying of the stretched tongue to the tube may even assist the latter in remaining in position.

The weight on the abdomen prevents the entrance of air in any considerable quantity into the stomach and the little which gets there escapes again when the insufflation is cut off; it never gets into the intestines. The pressure on the abdomen has still another significance. In patients with completely abolished respiration usually the blood-pressure is also very low and most of the blood may be accumulated in the abdominal viscera. The heart is then scantily filled, and not enough arterial blood is sent to peripheral organs. Under such circumstances a good pressure on the abdomen may raise the blood-pressure by even as much as 30 millimeters of mercury; the heart is filled more efficiently and sends more blood to the medulla oblongata, arousing there the activities of the respiratory and vasomotor centers. Figure 1 shows the effect of abdominal pressure on the blood-pressure.

For this reason I recommend to have a belt on hand to reinforce the pressure. With a belt alone not much success can be obtained. In cases of accidents, when it might happen that no suitable weight is at hand, the individual who handles the respiratory valve may sit down on the abdomen of the victim.

There might be conditions which do not permit the placing of weights on the abdomen; for instance, when a collapse occurs during a laparotomy. Under this circumstance a stomach-tube of a large diameter should be introduced through the esophagus into the stomach. The tube restricts to a sufficient degree the entrance of air into the stomach, and the air which enters there escapes readily through the tube. As stated before, in the anterior end of the pharyngeal tube is an opening for that purpose which is usually kept closed by a movable plate. A stomach-tube of a 33 French diameter fits exactly into this opening. I am of the opinion that it is preferable to have in every instance, even when pressure on the abdomen is exerted, also a tube in the stomach. Since the apparatus may have to be used in some emergency cases by laymen, however, the latter might be loath to handle a stomach-tube. And since the experiments have shown that very good results may be had with the pressure alone, I do not feel like insisting on the simultaneous use of the stomach-tube in all simple cases.

Besides the metal pharyngeal tube, I studied also the availability of the use of insufflation with the aid of a well-fitting mask. In this arrangement every other part is the same as in that for the pharyngeal tube, except that instead of introducing a tube into the pharynx, a mask is laid over mouth and nose and by bands tightly applied to the face. The mask has a hollow projection for the connection with the respiratory valve. I tested the mask method on various animals; as was previously found for the pharyngeal tube, it was established that

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also by means of the mask efficient artificial respiration can be carried on. With the aid of the mask method of artificial respiration, completely curarized (and anesthetized) animals were kept in an excellent condition for many hours. By this method, of course, some infectious matter may be driven into the trachea and perhaps cause infection; by this method, further, pressure is exerted on the middle ear; neither does the mask method allow the introduction of a stomach-tube. However, in dealing with emergency cases, with immediate danger to life, such considerations as the above mentioned are, comparatively speaking, mere trifles and can hardly be taken into account.

I have tested also the effectiveness of insufflation through metal pharyngeal tubes on animals; it is even more satisfactory than with elastic rubber tubes. It works promptly; the introduction gives less trouble and the tube remains in position for hours.

Both the pharyngeal and mask methods were tested also on human cadavers. Air entered into the lungs when insufflated by either of these methods, even if the dead bodies were in rigor or frozen stiff. In some cases unmistakable efficient respiratory movements of chest and abdomen were manifestly present. But even when the stiffness interfered with the free movements, auscultation proved conclusively the entrance of air into the lungs. Especially was this the case in a man who died under signs of pulmonary edema; râles could be heard all over the chest.

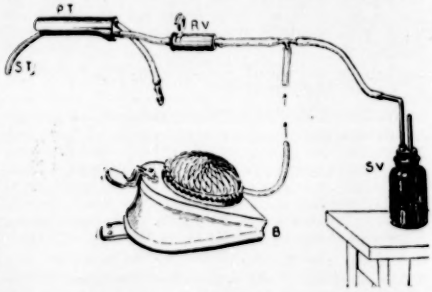

Fig. 2.—Arrangement of the pharyngeal device for artificial respiration. P. T., pharyngeal tube. R. V., respiratory valve. The ring turns the valve; turning to the right (facing the pharyngeal tube) brings an inspiration and to the left brings an expiration. B, foot-bellows. S. V., safety-valve. The bottle of the safety-valve should be shorter and have a wider diameter than the one in the figure; it is less likely to turn over. S. T., stomach-tube introduced through the opening in the pharyngeal tube.

The accompanying sketches illustrate these methods better than they can be described. In Figure 2, the pharyngeal tube (P. T.) is shown connected with the respiratory valve (R. V.), the foot-bellows (B) and the safety-valve (S. V.). A stomach-tube (S. T.) is pushed through the pharyngeal tube. In Figure 3 the mask (M.) is shown applied to the face. By means of an inflatable ring (Infl.) the mask is made air tight. There is a weight on the abdomen and a belt around it. The respiratory and safety valves are the same as in Figure 2. The bellows are here replaced by an oxygen cylinder.

In an emergency case no time should be lost on matters of less importance before starting the main act, and that is: The artificial respiration. When using the mask, for instance, no time should be lost in tying and fixing it properly; it should be pressed over mouth and face by the hand. After the insufflation is well on the way, some one may attend to the tying of the mask, the fixing of the tongue properly and the putting of the belt around the weight over the stomach. Regarding the fixing of the tongue, it may be, as stated before, tied to the pharyngeal tube, when using the same. When using the mask, the handle of the tongue forceps may be fixed to the victim's neck so as to keep the tongue stretched; or the tongue may be tied by means of tape or gauze bandage, pulled out well and the end of the tape or bandage tied around the victim's neck. It should be kept in mind that the pulling out of the tongue is an essential factor in any procedure for artificial respiration. In completely paralyzed individuals there is a tendency for the tongue to be kept somewhat firmly over the entrance into the larynx, caused, perhaps, by some final attempt at inspiration. I may say in passing that the demonstrations made with some machines for artificial respiration, for commercial and advertising purposes, on living and unanesthetized individuals, is entirely misleading and should not be taken as evidence of the efficiency of such machines in cases when individuals are unconscious and the respiratory mechanism paralyzed.

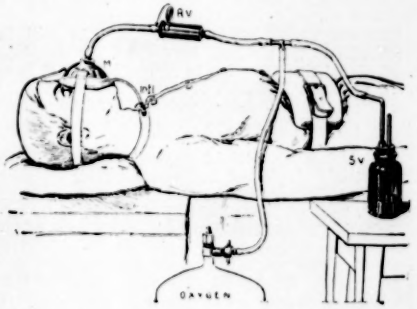

Fig. 3.—M., mask. Infl., tube for inflating the rubber ring around the rim of the mask. R. V., respiratory valve. S. V., safety-valve. An oxygen cylinder provides here the insufflation pressure. The figure shows also the weight on the abdomen and the belt around it.

It will be safer to have on hand a mask as well as a pharyngeal tube. When the latter should prove too small, the escape of the insufflated air alongside the tube may be remedied by tamponading the entrance into the pharynx around the tube with gauze. Besides, as I have indicated above, tubes of various sizes should be on hand.

The foot-bellows need not be large; smaller foot-bellows worked a little more rapidly give a sufficiently strong continuous current of air. The continuous air current is in the arrangement here described preferable to the interrupted current produced by hand-bellows; it is difficult to have the rhythm of the bellows coincide properly with the rhythm in the respiration produced by the respiratory valve; it may occur that the bellows are compressed just when the valve is closed, etc., and the result might be an irregular and inefficient artificial respiration.

It is evident that the methods of artificial respiration by devices here described can be readily combined with the Schäfer method of manual artificial respiration. The individual is then placed on his abdomen and the turning of the ring of the respiratory valve to the left

has to coincide in time with the pressure on the lumbar muscles. Inspiration as well as expiration will thus be efficiently reinforced. While on the basis of my extensive experience I have reason to believe that the devices which are here described will answer the purpose satisfactorily in all cases in need of artificial respiration, it is safer to think of methods which are capable of improving the efficiency of the devices. Emergencies may arise of which we are unable to think now; factors of safety are designated by some students of mechanics as factors of ignorance.

The emergency bag should contain small foot-bellows, the safety-valve, the respiratory valve and the pharyngeal tube all readily connected by rubber tubing. Further, a mask, a tongue forceps, a strong belt or cords, a stomach-tube, a role of tape or one-inch gauze bandages and scissors. Weights might increase too much the weight of the bag. Bricks, stones or pieces of heavy metal, etc., may be had at any place. At any rate, a strong one-inch thick wooden board, 8 by 6 inches, placed on the abdomen and pressed down well by means of two belts (or bandages), one at each end, will do the same service as heavy weights and will be a good deal lighter to carry. Short pieces of glass tubes, T-tubes and pieces of rubber tubing should be carried in reserve. Such a bag need not weigh more than ten pounds.

Wherever oxygen can be had it should be used in preference to the air from the bellows. It should be remembered that according to Hill and Macleod, however, prolonged inhalation of oxygen may do harm to the lungs. When, therefore, prolonged artificial respiration is required, the use of air should be alternated with oxygen.

The devices for artificial respiration here described are certainly simple and inexpensive. Their efficiency has been tested to a much greater extent than any other device I know of. The possibility of keeping up the circulation in a normal condition for hours while the voluntary respiration is completely abolished (by curare) is certainly a rigid test, which has not been applied to any other method of artificial respiration except to that used in experimental laboratories with tracheotomy as a prerequisite, and, as I may add, to the method of intratracheal insufflation. The last mentioned device, which has now been tested in nearly two thousand cases on human beings, would be, in my opinion, indeed the most ideal method for artificial respiration. It has been used, to my knowledge, in two human cases of severe poisoning (morphin 15 grains subcutaneously combined with inhalation of gas, and smoking opium for two days with complete absence of respiration) for twelve hours continuously with complete recoveries. But this method requires some training and could never be left to the hands of laymen. The handling of the artificial respiration by means of the pharyngeal and mask devices which I describe here is so simple that laymen could well be entrusted with its execution. And that was the main object of my endeavor to develop these devices. Cases of collapse from injuries, of poisoning by gas, of shock by electricity, etc., are discovered most frequently at places where there is no efficient medical help at hand, and time is here very precious. With the minutes which elapse without adequate help the chances for recovery diminish rapidly. These chances will increase when the devices for resuscitation are inexpensive, so that they could be had and be in readiness in larger numbers in many places, and are so simple that the execution of the resuscitation by means of these devices could be carried out by many laymen with success.

The necessity of having reliable devices for artificial respiration, however, is not confined to mines, to mills of all kinds, or to electric plants. They are surely of great necessity in hospitals. Not infrequently a surgical patient could be saved if artificial respiration could be carried on efficiently for some time. There are also numerous medical cases in which simple and efficient artificial respiration would prove life-saving. Temporary respiratory insufficiency or paralysis from any source (poliomyelitis, postdiphtheritic paralysis, tabes, eclampsias of all kinds, etc.), are not rare phenomena. And why not apply the mask method with oxygen and abdominal compression in many acute cases with inefficient circulation and respiration? "There is the possibility that the actual cause of death might be, in one case or another, especially in acute cases, only of a temporary nature, so that efficient artificial respiration might assist in temporizing and thus prove occasionally life-saving indeed. Such possibilities, though they may be realized only once in a thousand times, justify the making of an attempt in each and every instance."

Life depends essentially on the efficiency of the functions of respiration and circulation. All deaths are due in the last analysis to the failure of either of those two functions. Reliable devices by means of which the function of respiration can be kept up efficiently for many hours are bound to be the means of saving many lives. I am confident that the method of intratracheal insufflation as well as the pharyngeal and the mask methods described here are such reliable devices for efficient artificial respiration.

Sixty-Sixth Street and Avenue A.

THE CARBOHYDRATE TREATMENT IN DIABETES *

HERMANN STRAUSS, M.D.
Professor of Internal Medicine at the University of Berlin
BERLIN

The meaning of the carbohydrate treatment in the modern sense is the use of one sort of carbohydrates in nutrition, excluding other sorts, with the aim of diminishing glycosuria and of strengthening tolerance. The other (non-carbohydrate) articles of diet may be varied from time to time, but, as it is desirable to reduce the quantity of protein, meat is not given and only a small quantity of albumin.

This treatment is by no means new. There was a time when it was considered necessary to replace the sugar lost in the urine of diabetic patients; for instance, Piorry and Bouchardat record the experiments of French and English physicians who tried to treat diabetes with great doses of cane-sugar. As far back as fifty years ago, Donkin recommended his diabetic patients to live entirely on donkey's milk for a long period and since then the milk treatment has played a certain rôle in the treatment of diabetes for a time, although it has been opposed by Frerichs. The milk treatment was again recommended by Oettinger, Winternitz and Strasser at the end of the last century. The last-named physician, however, later wrote against the too general use of the milk treatment, and Naunyn and von Noorden opposed it altogether. Every physician who has treated many diabetic patients, however, knows that occasionally milk gives very good results. I can also record occasional

*Read before the Northern Medical Association of Philadelphia, Oct. 12, 1912.

good results, especially among the neurogenic forms of diabetes. We shall easily understand why the milk method gives good results in some cases if we remember that it is a form of low diet, and further that with many people the milk-sugar is so slowly split that it is only gradually absorbed by the bowels. And, lastly, we know through the Karell method that milk is particularly capable of allaying hunger and thirst. It is also well-known that the albumin of milk is not irritant. In conclusion I wish to say that it is necessary to apply the milk treatment with due regard for the individual case; this is true also of the use of milk in general for diabetic patients, as the tolerance for milk varies greatly.

Not so modern a treatment is the rice treatment of von Düring. This consists of daily rations of 80 to 100 gm. of well washed rice that has been soaked over night. At the same time 250 gm. of meat are given daily. This treatment has proved successful not only on account of offering less calories but also because von Düring laid down many important rules concerning the general hygiene of the diabetic patient which greatly contributed to the success of the method. A treatment which resembles more the modern carbohydrate treatment is the use of potato of Mossé of Toulouse. Mossé gave potatoes gradually in the place of bread to diabetic patients till at last the daily diet consisted exclusively of 3 to 4 pounds of potatoes. Physicians greatly differ in their judgment of this method; whereas some warmly recommend it (Sawyer, Friedenwald, Labbé), others think less of it (Warschawski, Lewascheff). From my own experience, I cannot recommend the potato treatment without making some restrictions. It is an undisputed fact that the potato treatment has certain advantages, as potatoes are satisfying without being too concentrated and are capable of allaying thirst, as they contain much water. As they contain alkali, they are valuable for diabetic cases with acidosis, but the potato treatment has not been much in use.

Another method of far greater importance than those just spoken of is the oatmeal treatment. When von Noorden recommended it in 1902, he proposed to give 250 gm. of oatmeal, from 200 to 300 gm. of butter, 100 gm. of vegetable albumin or from 5 to 8 eggs. More recently von Noorden altered this treatment. Before and after the above-mentioned diet, which he prescribed for three days, he orders two days of vegetables and eggs, and in some cases no additional albumin. A great deal has been written about the oatmeal treatment, from which can be deduced that it is useful in serious cases, especially in those combined with acidosis. It is also especially useful in diabetes in childhood, and before and after operations. Some authors have stated that the use of oatmeal has been known to effect the recovery of the diabetic patient when all other methods have failed. It can never be previously determined, however, whether or not the oatmeal treatment will prove successful, as there are cases in which it has no effect. It is therefore not surprising that there are differences of opinion about this treatment. Whereas Siegel, Mohr, Langstein and others recommend it, Naunyn is less warm in his recommendation. It must also not be forgotten that the oatmeal treatment is distasteful to many patients and therefore some attention to detail on the part of both physician and patient is needed if it is to be continued for a certain period.

There are theories that oatmeal differs from other sorts of flour in the influence on metabolism. But L. Blum has lately brought forward weighty reasons against such a view. This author criticizes the new modification (the oatmeal treatment with the two vegetable-and-egg days preceding and following) by means of comparative examinations of wheat flour. These experiments proved that wheat flour is tolerated as well or almost as well as oatmeal under specified conditions; these conditions are a diet without meat and with only a small quantity of albumin. Blum's researches were conducted in a much more systematic manner than those of Falta, Lampé, etc., which had indicated the superiority of oatmeal to other cereals. The researches made by Baumgarten, Grund and myself in order to test the results of Blum have entirely confirmed them. Owing to my own experiences which I have reported in another communication, I am quite of Blum's opinion as to the arrangement of the treatment, namely that to omit meat, to give only a small quantity of albumin and to compute the calories are items of great importance in the carbohydrate treatment, as well as a previous and a subsequent diet of vegetables and eggs. The presence of a growth of saccharolytic organisms in the intestines — a matter mentioned by Klotz — is perhaps of importance also. Klotz says that the days of vegetables and eggs with many patients allow the carbohydrate flora to take the place of the meat flora in the intestines and this makes it possible for the system more completely to exhaust the starch grains, which, without increasing the secretion of sugar, may still be of use to the diabetic patient. The use of flour in soups also seems to be of great importance. The same quantities, in bread, however, have not given equally good results. It therefore seems that chemical and physical changes are produced by different ways of cooking.

The researches of Blum have given new suggestions on the subject in question, especially inasmuch as he individualizes by abandoning the strict scheme, and giving as much meal in soup form as the patient can tolerate. As to the reduction of the quantity of albumin, I am not quite of the same opinion as Blum and should only recommend such a great reduction for a short time, but for longer periods I recommend not less than 50 to 60 gm. daily. That the restriction not only of calories but also of albumin has a very good effect on some patients is seen by the success of "drinking days" which cause a very considerable diminution of sugar and acetone secretion. These drinking days are made less disagreeable to the patient by giving, besides water, tea, coffee, lemonade, and small quantities of fruit and nuts. A further progress could be made by using those carbohydrates for which the diabetic organism has a better tolerance. We have known for some time that the tolerance of diabetic patients differs toward various sorts of carbohydrates and in my publication of former researches I have made a scale in which the tolerance for levulose, lactose, glycose, starch and galactose was diminishing. I further found in researches concerning the appearance of alimentary glycosuria the sugar secretion to be greater when sugar was given in full dosage than in broken dosage.

In consequence we may say that a certain quantity of carbohydrates agrees with the diabetic patient better, the more slowly it is absorbed. I have tried the polysaccharid of levulose, inulin, for the treatment of diabetic patients. Inulin has been recommended by Kulz and also by Naunyn whose recommendation was founded on the results of his pupil Socin. Kulz as well as Naunyn studied its influence on glycosuria. Therefore when I made my extensive researches concerning the tolerance

of diabetic patients to inulin. I thought it necessary to study not only the action of glycosuria but also that of acidosis. A result of this was that in grave cases of diabetes inulin was better digested than the same quantity of wheat flour and that in most cases the acidosis became greatly reduced during the inulin period. Therefore I recommend inulin in grave cases of diabetes, especially in those combined with acidosis. I do this although I am fully aware of the necessity of further investigations being made into this question of the utilization of inulin in the animal organism.

L. Mendel, for instance, doubts the fact of inulin being extensively absorbed by the bowels, whereas Minra found an increase of glycogen in the liver in most cases after inulin feeding. On examination of the feces after giving inulin, I could only find slightly more carbohydrates than is generally found. Lewis, a pupil of Mendel, has lately made a similar observation, though this does not absolutely prove that the inulin has really been absorbed. Nevertheless this seems very probable as Goodberg (St. George Hospital, Hamburg) lately showed that the respiratory metabolism is influenced by inulin in a similar way as by starch.

I gained my experience with inulin in the following way: To a certain diet, mostly vegetables, and eggs, I added 100 gm. of inulin baked in omelets or mixed in soups, vegetables or fruit poor in carbohydrates. Latterly I have repeatedly given courses of treatment by inulin in the same way as by oatmeal, in the form of a certain weekly routine. To two vegetable-and-egg days I added three inulin days (5 to 100 gm. of inulin daily) and finished up with two vegetable-and-egg days.

It is clear that a carbohydrate treatment can only be used periodically and then only in grave cases of diabetes, the lighter cases being treated in future also on the old and tried principles. But the new researches have shown that especially among grave cases of diabetes there are cases which are sensitive to albumin, and at least for these we know the principle not to give unmeasured quantities of albumin as was done in former times. It seems to me to be of special importance that we have gained the knowledge that in grave cases meat endangers the tolerance. That, besides this experience, a certain scarcity of calories in the regimen for grave cases is useful has been proved not only by clinical experiences (Bouchardat said: *Mangez le moins possible!*) but also by the researches of Naunyn and his pupils, who prove that a quantity of 25 calories per kilogram is sufficient for many diabetic patients. Therefore a proposal made years ago by Rolisch, to nourish in grave cases with a vegetable diet, deserves full consideration. The vegetable diet excludes meat but is rich in alkalies and not only poor in albumin and calories but also specially adapted to allay hunger through its large volume and to allay thirst through its great content of fluid. Another point to be noted is that the carbohydrates contained in plants are only slowly attacked by the digestive juices and are therefore only slowly absorbed, which is favorable for tolerance. De Renzi has pointed out that green vegetables are especially good for the nourishment of diabetic patients. Perhaps the flora in the bowels may also be favorably influenced by the vegetable diet. But it must be noted that not every form of vegetable diet is suitable for the diabetic patient. The diet must be poor in carbohydrates and rich in fat and those carbohydrates must be preferably given for which the patient has a specially high degree of tolerance. The new researches have taught us that the manner in which the carbohydrates are given is of great importance. It is therefore the duty of a rational therapy to find, not only that preparation of carbohydrates but also that sort of carbohydrate of which each individual patient can tolerate the greatest amount without secreting a great quantity of sugar. This complicates the dietetic treatment of the diabetic patient but also makes it more successful than was formerly the case.

Through the progress of science, the art of the individualizing therapy has developed for the benefit of the patients.

Kurfürstendamm 239.

ATYPICAL PHARYNGEAL DIPHTHERIA

S. C. LIND, A.B., M.D.

Clinical Assistant in Medicine, Lakeside Hospital; Medical Inspector in Public Schools

CLEVELAND, OHIO

Notwithstanding the numerous articles on diphtheria in the various journals during the past two years, little or no mention is made of the atypical pharyngeal cases. A great deal has been published on typical clinical diphtheria, and on the carrier, his menace to the community and the methods of freeing such individuals from the bacillus. A rather complete examination of the literature of the past two years discloses no cases paralleling three that have come under my observation.

We are apt to think of pharyngeal diphtheria as being a disease of sudden onset with general malaise, hyperemic throat in which a membrane rapidly forms, and finally terminates after a severe course. Once an exudate has appeared on the tonsils it is generally held that membrane formation progresses actively unless antitoxin is given. In Osler's "System of Modern Medicine" we find the following:

> **Pharyngeal diphtheria commences with a feeling of chilliness, not amounting to a distinct rigor, headache not particularly severe and a rise in temperature not particularly marked. The soreness of the throat at the onset is not very severe, but at the end of twelve hours becomes more pronounced, and if the fauces are examined there will be found a peculiar congestion of the tonsils and adjacent parts which has a distinctive, almost purplish, hue. At the end of twenty-four hours patches of membrane of a dirty white color can be seen. At the end of thirty-six hours or twenty-four hours from the appearance of congestion of the throat, the membrane extends very rapidly, and covers the tonsils, uvula, and the hard and soft palate. Dysphagia now becomes a prominent symptom; the temperature has risen two or three degrees; the prostration commences to be marked. The membrane, which has been quite thin, now becomes very marked, and cannot be removed from the subjacent parts without difficulty and leaves a bleeding surface, etc.**

How different is the clinical course of diphtheria in the following! These cases came to my attention while acting as medical inspector in certain of the Cleveland public schools. The diagnosis in each instance was confirmed by cultures examined at the city laboratory, and, as each throat was cultured at least once after the diagnostic culture was made, we can eliminate any possibility of a mistake on the part of the laboratory. The children all showed hyperemic throats; two had small "creamy blue" exudates on one of the tonsils, and all had mild constitutional disturbance. Two showed a slight rise in temperature; the temperature of the third was not taken. In short, they were suffering from a mild attack of pharyngeal diphtheria, and although none of them was

given antitoxin the exudate promptly disappeared, and all were to outward appearance perfectly well. Without laboratory diagnosis the true nature of the disease would have been unrecognized, and probably called "light tonsillitis." The children would have returned to school in a few days and served as distributing agents for the Klebs-Loeffler bacillus.

CASE 1.—Ellen K., aged 11, Clark School, Oct. 14, 1912. Complaint: sore throat. For twenty-four hours the child had experienced slight distress on swallowing, and some constitutional disturbance but not enough to keep her from school. Inspection of the throat showed some hyperemia and congestion of the pillars, tonsil, and posterior pharyngeal wall. A culture was made and the girl excluded from school until a report could be had from the laboratory. Diphtheria bacilli being found, quarantine was established. The family physician was called. No antitoxin was administered, nor was the patient put to bed. Quarantine lasted twenty-six days.

CASE 2.—Howard D., aged 11, Kentucky School, Oct. 22, 1912. During a routine inspection of throats this boy was found to have considerable hyperemia of the throat and a "creamy blue" exudate about one-eighth of an inch in diameter on one of his tonsils. Temperature (mouth) 99.6. Culture showed diphtheria bacilli. No antitoxin was given by the family physician, and the boy says that he felt well during quarantine except for one day when he experienced some constitutional disturbance and thought he was "feverish."

CASE 3.—Margaret H., Orchard School, Jan. 14, 1913. The girl was sent for inspection because of swollen lymph-nodes. The teacher feared mumps; the submaxillary lymph-nodes on both sides were hard and somewhat tender. Nothing was found in either the mouth or throat, but she was excluded. One week later she returned to school and was again inspected. The throat was quite red and on the right tonsil was seen a round dirty white membrane about one-quarter of an inch in diameter. Mouth temperature 99.4. Two swabs were taken and a culture made. A preparation made from one of the swabs, and examined by myself, showed diphtheria bacilli, and this finding was confirmed by the culture sent to the city laboratory. The child felt well and wanted to remain in school. Quarantine was established but no physician called until, quarantine becoming irksome to the parents, one was sent for to take a culture for release. The child says that she was up and about and did not feel ill.

It seems scarcely fitting to classify these patients under the head of diphtheria carriers. A carrier is a person who harbors virulent pathogenic organisms without evidence of reaction. As the above cases all showed some reaction, both local and general, we must classify them as atypical pharyngeal diphtheria. Without culture they would have escaped recognition; their identification rested with the laboratory. Here again is emphasized the necessity of making a culture from every "sore throat." A case of so-called tonsillitis may clear up in a few days and still be dependent on the Klebs-Loeffler bacillus.

I have made this brief report with the hope that it may awaken interest in atypical manifestations of pharyngeal diphtheria. These cases are not uncommon, and their detection is of the utmost importance in preventing the spread of diphtheria. Let us bear in mind the rôle of cultures as a diagnostic measure.

1864 East Eighty-Second Street.

Things Necessary for the Complete Study of a Disease.—For the satisfactory and complete study of a disease three things are necessary for the student: he must see the disease in a living patient, he must see after death the effects that that disease has produced in the patient during life, and he must study all that is recorded in literature on the subject.—F. M. Sandwith, in *Clin. Jour.*

TUBERCULOSIS OF THE LARGE ARTERIES

WITH THE REPORT OF A CASE OF TUBERCULOUS ANEURYSM OF THE RIGHT COMMON ILIAC ARTERY*

SAMUEL R. HAYTHORN, M.D.
Assistant Professor of Pathology, University of Pittsburgh
PITTSBURGH

Tuberculous lesions of the vascular system have long been of interest as points of distribution of bacilli in cases of general miliary tuberculosis. The following example of such a lesion is noteworthy for two reasons: first, on account of its rarity; second, because it gave rise to the presence of great numbers of tubercle bacilli in a few glomeruli in the kidney, where they caused little or no reaction in the tissue about them. Weigert, as early as 1877, pointed out the important relation between tuberculous lesions of the vascular system and general miliary tuberculosis. Following his papers a very large literature has grown up on the subject. All manner of tuberculous vascular conditions have been carefully studied and described. These have included lesions of the thoracic duct, pulmonary and systemic veins, large and small arteries, and even of the heart itself. Commonest of all are the lesions of the veins and especially those of the pulmonary veins, while those of the aorta and its main branches are exceedingly rare.

Four general types of tuberculous lesions of the aorta and its main branches have been described: (1) miliary tuberculosis of the intima; (2) polypi of tuberculous tissue attached to the intima; (3) tuberculosis of the wall, involving the several layers; and (4) aneurysms, the walls of which are composed of tuberculous tissue.

The first-mentioned class, that of miliary tuberculosis of the intima, is by far the most common type recorded. It is most often described as occurring alone, but has also been found as an accompaniment of the other forms mentioned. Benda and Geisler[1] reported an exceedingly interesting example, in which not only the intima of the aorta, but also that of the iliacs and femorals were covered with bright, glistening miliary tubercles. Thorel[2] had a case with extensive involvement of the intima of the aorta. Other well-marked cases have been given by Hanot,[3] Schudardt,[4] Weigert,[5] Marchand and Huber,[6] and others.[7]

Examples of the second type have been placed on record by Benda,[8] Stroebe[9] and Aschoff.[10] The lesion consists of a small pear-shaped mass of tissue, which resembles a white thrombus in appearance, and is attached by a pedicle to a slight elevation of the intima, with the distal portion swinging free in the direction of the blood-current. In Benda's two cases the attach-

* Reported from the Pathologic Department of Harvard University.

1. Benda und Geisler: Quoted by Thorel; see Note 2.
2. Thorel: Pathologie der Kreislauforgane, B. Gefasse. Labarsch-Ostertag, Ergebn. der Path. u. Anat., 1906, Part 1, p. 1040.
3. Hanot, V.: Tubercle de l'aorta, Sem. méd., 1895.
4. Schudardt, C.: Die Impftuberculose des Auges u. der Zusammenhang mit der allgem. Miliartuberkulose, Virchows Arch. f. path. Anat., 1882, lxxxviii.
5. Weigert, C.: Ueber Venentuberkel und ihre Beziehungen zur tuberkulösen Blutinfection, Virchows Arch. f. path. Anat., 1882, lxxxviii, 308.
6. Marchand und Huber: Cited by Weigert (see Note 5), p. 360.
7. Chiari, H.: Aortitis tuberculose, Ver. deutsch Aerzte in Prag., Dec. 5, 1902.
8. Benda, C.: Casuistische Mitteilungen über Endangitis tuberkulose, Verhandl. d. deutsch. path. Gesellsch., 1900, p. 335.
9. Stroebe: Ueber Aortitis tuberculosa, Centralbl. f. path. Anat., viii, 1897.
10. Aschoff: Ueber Endaortitis tuberculosa Verhandl. d. deutsch. path. Gesellsch., 1900, p. 419.

ments of the polypi were over old atheromatous areas. Benda thought that tubercle bacilli from the blood had been implanted on the old sclerotic patches and that this was followed by thrombus formation over the area, which later became partially organized and assumed its polypoid form through the constant pulling of the circulating blood. In one of his cases the polyp reached a size of 1.2 cm. in length. Microscopically the polypi are seen to be partially caseous and to contain numerous tubercle bacilli.

Under the third heading are included all tuberculous lesions affecting the several layers of the wall. Dittrich[11] reported a case in which the tuberculous process spread from a near-by caseous lymph-node and invaded in turn all of the layers of the aortic wall; a thrombus was attached over the point where the intima was affected. Buttermilch[12] had a case which came in a similar way from a tuberculous process in the vertebral column and brought about the formation of a nodule of tuberculous granulation tissue in the media, which pushed up beneath the intima and encroached on the aortic lumen. Hedinger[13] and Schwalbe[14] have also reported cases in which tuberculous granulation tissue has destroyed parts of the aortic wall.

Of the fourth and last group I have been able to find only four recorded cases and for the sake of comparison with my own case, it will be necessary to go somewhat more fully into the description of each case.

Kamen[15] described an aneurysm of the ascending portion of the aorta just above the aortic cusps. The patient was a soldier 24 years old who had chronic pulmonary and acute miliary tuberculosis. Death occurred from rupture of the aneurysm. The outer portions of the wall were in contact with a caseous lymph-node of the posterior mediastinum and showed advanced tuberculosis. The aneurysm was of the dissecting type and its cavity communicated with the lumen of the aorta through a tear in the intima.

Hannau and Sigg[16] reported a case of an aneurysm of the thoracic aorta arising in connection with a tuberculous lung cavity. The entire wall became replaced by tuberculous tissue. The cavity was filled with a caseating mass of thrombotic material.

Ribbert[17] demonstrated a specimen, from a woman 46 years old who died of chronic pulmonary tuberculosis, in which communication had been established between the lumen of the aorta and a cavity lying in a large tuberculous mass, which arose from the periosteum of the vertebrae. The outer layers of the aorta had been destroyed and replaced by tuberculous tissue and the process had advanced until rupture of the intima had occurred. A small oblique tear of the intima opened into a short canal which led from the aorta into the cavity. The cavity itself was nearly filled with caseous clot. As he points out, this was not a true aneurysm although the circulating blood passed in and out of the sac.

Councilman and Mallory[18] have given a very full description of the following case which occurred in a man who died of general miliary tuberculosis, affecting practically all of the organs. Old fibroid and calcareous nodules and large conglomerate tubercles were also found in the lungs. The entrance of the aneurysmal sac was seen as a small opening, resembling the exit of an artery, situated on the anterior surface of the lumen of the aorta 6 cm. above the celiac axis; it admitted a probe for a distance of 2 mm. From the outside the sac appeared as a spheroidal mass, measuring 1 cm. in its transverse and 0.6 cm. in its longitudinal diameter. The surface was smooth, reddish-grey in color and showed several whitish streaks. On the intima of the aorta beneath the opening were many miliary tubercles. A few scattered tubercles occurred lower down.

Microscopic sections of the aneurysm showed short depression in the wall of the aorta; a cleft at the bottom of this opened into a wider space, which in turn extended into a cavity, probably beyond the adventitia. The intima appeared to pass down through the cleft as a covering for the broken ends of the media and then became lost in the necrotic contents of the cavity. Between the intima and the media, there was a small focus of caseation necrosis. The media for the greater part appeared normal up to the place of rupture. The break was sharp and oblique. The broken ends of the elastic fibres were plainly seen. The outer layers of the media had undergone caseation necrosis. The adventitia was normal up to the point where it spread out into a mass of thickened connective tissue which lay on each side of the cleft, and portions of this were caseous and necrotic. The cavity was lined with fibrinous, partially caseous, hyaline material on the inside of which was a small irregular thrombotic mass, composed largely of dead cells and well preserved polynuclear leukocytes and endothelial cells. Stains for tubercle bacilli demonstrated the presence of great numbers in the thrombotic material.

The question of the process of development of tuberculous lesions in the arteries has given rise to considerable discussion. One school headed by Benda asserts that in the large majority of cases the lesions arise from direct implantation of the bacilli on the intima. In support of this theory they cite the facts that lesions have been found affecting the intima and not the media; that such lesions have often had their beginnings on old atheromatous ulcers which were not in themselves tuberculous; that in some cases in which more than the intima was involved there was no near-by focus, and further that in some of these latter instances tuberculous processes have been found in the thoracic duct or pulmonary veins, showing another point of entrance for the bacilli into the blood. Weigert[19] and his pupils, on the other hand, believe that the lesions come only from without and that the bacilli are implanted either by direct extension to the adventitia or through the vasa vasorum at the site of the disease process. Chiari, who made as complete a study of these conditions, perhaps, as has yet been made, concludes that they develop in all three ways, and vary in the individual cases.

The instance which I am reporting was obtained from an autopsy done at the Boston Municipal Tuberculosis Hospital at Mattapan. I am indebted to Dr. Francis P. McCarty for the clinical data. For the sake of brev-

11. Dittrich: Ein Beitrag zur Pathologie der akuten allgem. Miliartuberkulose, Prag. Ztschr., xix, 1888.

12. Buttermilch, W.: Ein Fall von Tuberkulöse der Aortenwand, Inaug. Diss., Berlin, 1898.

13. Hedinger, E.: Miliartuberkulöse der Haut bei Tuberkulose der Aorta abdominalis, Ztschr. f. path. Anat., 1908, ii, Part. 1.

14. Schwalbe: Ein Fall von primärer käsiger Tuberkulöse der Aorta und der Arteria Pulmonis, Militärärztl. Ztschr., 1903.

15. Kamen: Aortenruptur auf tuberkulöser Grundlage, Beitr. z. path. Anat. u. z. allg. Path. (Ziegler's), 1895, xvii.

16. Hannau und Sigg: Beiträge zur Lehre von der akuten Miliartuberkulose, Mitt. a. klin. u. med. Inst. der Schweiz, Series 4, iv, 1896.

17. Ribbert: Mitteilung über ein tuberkulöses Aneurysma der Aorta, Sitzungsb. d. nied.-rhein. Gesellsch. f. Nat.- und Heilk. zu Bonn, med. Section, May 14, 1910.

18. Councilman and Mallory: A Study of Lesions in Selected Autopsies, Med. and Surg. Rep. Boston City Hosp., 1896.

19. Weigert, C.: Fall von Venentuberkulose Sitzungsb. d. schles. Gesellsch. f. vaterl. Kultur, July 13, 1877.

ity the history had to be considerably shortened, and only the most pertinent facts retained.

REPORT OF CASE

Patient.—F. J. Mc., man, aged 33; porter. Clinical Diagnosis: General miliary tuberculosis; chronic pulmonary and right-sided renal tuberculosis; tuberculous enteritis and aortic aneurysm.

History.—Patient had been twice married and had five living children. The first wife and one child died of tuberculosis. The patient was treated fifteen years previous to present attack for

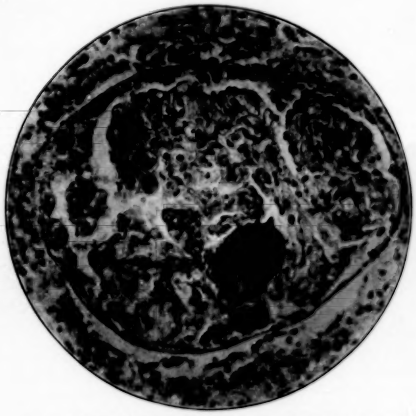

Fig. 1.—Masses of tubercle bacilli in the glomerulus of the kidney without inflammatory reaction about them.

pleurisy with effusion. Two years before he had right testis removed at Massachusetts General Hospital, and a report of tuberculosis was returned from the laboratory. The patient made a good recovery and worked up to one month before death. He gave history of having received a kick in the abdomen by a horse five years previous to entrance to hospital. On entrance to the hospital, patient gave history of diarrhea for the past six months; of having lost 20 pounds during the last three months; and of bloody sputum for the last month. He was short of breath, had a severe cough and an elevation of temperature toward evening. He complained of a painful dryness of the throat.

Examination.—There was dulness of both apices which extended on the left side to the third rib, and on the right to the second rib in front, and to the lower border of the scapula in the back. The throat was deeply fissured and dry, but not ulcerated. The right testis was missing; the left apparently normal. A pulsating area about the size of a walnut was found somewhat to the right and below the umbilicus and over it a systolic bruit was heard. The liver was greatly enlarged and the right kidney was palpable, movable and tender. The clinical laboratory reported many tubercle bacilli found in direct smears from the sputum, feces and urine. The urine showed a specific gravity of 1.012, was acid and gave positive albumin and negative sugar reactions. The sediment contained many granular casts and pus-cells. There was a white blood-count of 15,000; a differential count was not made.

On the day before death, the patient developed marked dyspnea, moist râles in the right base and hyperresonance anteriorly. Miliary tubercles were observed on the back of the throat.

Necropsy.—At necropsy the examination was limited to a 15 cm. abdominal incision, so that the aneurysm and most of the other organs could not be observed *in situ*. There was no swelling or other external means of determining the location of the pulsating area observed on clinical examination.

Aneurysm: In front of the right common iliac artery a smooth spindle-shaped enlargement was felt. It was so densely adherent posteriorly that it was torn when it was removed. It was found to be covered with peritoneum, free from adhesions on its anterior surface, and covered with dense fibrous adhesions posteriorly, which gave it a ragged appearance. It measured 7 cm. in length, 4 cm. in breadth and 3 cm. in thickness. Its wall appeared to be continuous with the common iliac above and with the internal iliac below. The external iliac came off from the lower portion of the mass posteriorly. On opening the vessels, the enlargement was found to contain an aneurysmal sac, the cavity of which communicated with the lumen of the common iliac artery through an opening on its anterior wall, just above the division into internal and external iliacs. The opening was nearly 2 cm. long and 0.8 cm. wide. The interior of the sac was almost filled with reddish-grey thrombotic material which appeared caseous. This material presented a smooth surface which came directly in contact with the circulating blood.

Microscopically the outer wall of the sac was found to be continuous with the adventitia of the common iliac above and with that of the internal iliac below. It contained large masses of caseous material. The media and intima took no part in the enlargement. They continued unbroken until at a point about 2 cm. above the tear the outer elastic fibers of the media began to turn into the contents of the sac.

From this place on, the media became gradually thinner until at the point of rupture it was only about half its original thickness. The broken ends of the elastic fibers of the media were turned completely back on themselves and spread out in the caseous contents of the sac. The intima was thickened just

Fig. 2.—Masses of tubercle bacilli in the caseous clot in the aneurysmal sac.

above the break. It followed the inner fibers of the media outward through the opening and became lost in the mass of caseous material. The cavity was filled with lamellated thrombus, which still gave the fibrin reaction, though it was for the most part in an advanced stage of caseation necrosis. In the section taken from the upper lip of the tear there was seen a polyp-like piece of clot, which extended into the cavity and must have partially occluded the opening during life. The remaining portion of the surface of the clot was smooth. Great numbers of acid-fast bacilli were found diffusely distributed in the polypoid piece of clot and throughout the entire contents of the sac. There were also clumps of these bacilli so large

that they appeared as red blotches under the low power. They resembled colonies from pure cultures of tubercle bacilli. In a section taken from the lower portion several small lymph-nodes containing areas of caseation were seen lying between the internal and external iliac arteries.

Kidneys: Together the kidneys weighed 450 gm. They presented granular surfaces, swollen cortices, fatty streaking of the medullae and a moderate number of caseous tubercles. Microscopically some of the glomeruli of the kidney were filled with clumps of acid-fast bacilli. About these there appeared no evidence of reaction, either inflammatory, proliferative or necrotic. The capillaries of these glomeruli were simply dilated and filled with masses of red-staining bacilli. In one or two instances simple proliferation of the pericapsular endothelial cells of the glomerulus was observed. The proliferating cells contained similar bacilli. There was here no suggestion of exudation. Many early tubercles without caseation were seen in the kidneys, some of them bearing a definite relation to glomeruli. Older lesions were present but not numerous; they were caseated single and conglomerate tubercles.

Lungs: The left lung was covered with old fibrous adhesions. Beneath the pleura could be seen and felt many small, firm white nodules varying considerably in size. In the upper lobe was a small thin-walled cavity 3 cm. in diameter. The cut surface presented tubercles varying in size from the finest glistening points to a diameter of about 3 mm. In the upper lobe were several foci of caseous consolidation. The right pleura showed a single band of apical adhesions and was otherwise free. The right lung contained no cavities. Many minute tubercles were seen on the cut surface. The greater portion of the lower lobe was consolidated and scattered over with yellowish tubercles. Microscopic preparations from the lungs showed typical tuberculous lesions ranging from the earliest endothelial proliferations without caseation to old conglomerate tubercles. Sections were also made to confirm the tuberculous nature of the pneumonic areas and of the wall of the cavity. Stained with Ziehl-Nielson's method the sections showed enormous numbers of acid-fast bacilli.

Other Organs: The spleen weighed 300 gm., was enlarged, congested and contained many finely granular tubercles. The liver weighed 2,275 gm., was enlarged, fatty and contained many tubercles, some of which were caseous. The intestine and urinary bladder showed ulcerations. The right seminal vesicle and prostate contained caseous material. The heart, aorta, stomach, pancreas, gall-bladder, adrenals, left testis, epididymis and seminal vesicle were negative.

All of the gross lesions described above were verified microscopically.

In spite of the fact that no cultures were made in this case, we concluded that we were dealing with tubercle bacilli because the lesions were typical of tuberculosis in every way, and the organisms, so far as morphology, staining reactions, and distribution were concerned, were identical with those of the tubercle bacillus in acute miliary tuberculosis.

It seems that in this case the process leading to aneurysm came from without, but since the attachment to the vertebral column could not be seen we do not feel certain whether it came from a caries of the bone or from tuberculosis of some of the surrounding nodes. Neighboring tuberculous lymph-nodes were found but the lesions in these might have been secondary and not primary. The important evidence then lies in the facts that the more advanced lesions were in the adventitia and the outer layers of the media, while the inner layers of the media and the intima showed only the effects of rupture. The history of the kick was ruled out as a possible cause on the ground that the aneurysm was protected on all sides from direct injury by the bony pelvis.

We believe then that the tuberculous process spread directly to the adventitia of the right common iliac artery from some near-by focus; that it so involved the media as to lead to rupture; that the pressure of the blood pouring through the opening separated the inner layers of the media from the outer layers and the adventitia, thus producing a sort of dissecting aneurysm; that the blood in the sac thus formed underwent coagulation and became infected from the tuberculous adventitia, and served as a medium for the growth of the tubercle bacilli and as a source of constant supply of them to the blood. In this way the marked variation in the age of the miliary tubercles of the organs is satisfactorily explained.

The presence of tubercle bacilli in the glomeruli of the kidney without inflammatory reaction, we think, indicates that the patient had reached a stage in which his system of defense — call it "immune bodies" or "what not" — was so exhausted that it could no longer react against the stimulus of the toxins of the tubercle bacillus. This we believe to be analogous to those cases of advanced tuberculosis and miliary tuberculosis in which the tuberculin reaction fails.

In other glomeruli, the multiplication of the pericapsular endothelium containing tubercle bacilli, we believe to be definite instances of simple endothelial proliferation, without exudation, due either to the toxin or the presence of the tubercle bacilli.

In closing I wish to express my indebtedness to Drs. Councilmann, Mallory and Klotz for their help and suggestions in the preparation of this paper, and to the former for the use of the pictures.

TREATMENT OF FELONS WITH REFERENCE TO THE PATHOLOGIC ANATOMY AND LOCATION OF INCISIONS

GEORGE MORRIS DORRANCE, M.D.
Surgeon to St. Agnes Hospital; Associate Surgeon to Polyclinic Hospital
PHILADELPHIA

A felon is primarily an inflammation of the connective-tissue space which is situated on the palmar surface of the last phalanx of the fingers (Fig. 2).

This definition was determined on after studying the anatomy of this part and making careful dissections of several felons. The anatomy of the anterior or palmar surface of the last phalanx is exceedingly interesting. In studies of the longitudinal and cross-sections, one will note a connective-tissue space situated anteriorly to the bone. The space is surrounded by a dense wall of connective tissue which prevents the escape of any substance injected into it. To demonstrate this space or cavity, I have injected it with wax. The specimen was then frozen and a longitudinal section made showing the space to be greatly distended and completely walled off from the remaining subcutaneous tissue of the rest of the finger (Fig. 2).

It has been noted by Kanavel that the epiphysis of the distal phalanx is supplied by a branch of the digital artery before it enters this connective-tissue space, whereas the diathesis is supplied after the artery enters this space. This arrangement I have usually found present on one side or the other of the finger. A careful study of Figure 1 will make this point clear.

It can be readily understood after studying the anatomy of the end of the finger why we sometimes have

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necrosis of the end of the bone in felons which are opened late. The diathesis is supplied by a separate artery after it enters this connective-tissue space and when we have an inflammation of this space there is considerable swelling which presses on these arteries and cuts off the blood-supply, thereby giving a necrosis of the diathesis but not of the epiphysis, this latter being supplied by branches of the digital arteries before they enter this space. This condition of affairs is shown in Figure 1.

The pain, which is throbbing in character is produced by obstruction of the venous return caused by pressure of the inflammatory material so that each pulsation of the arteries makes pressure upon the nerves in the closed space.

The source of the infection may be a pin- or needle-prick or local trauma but frequently no history of the cause is obtainable. The first intimation the patient has of the trouble is a sticking pain in the tip of the finger, which rapidly becomes throbbing in character. Within a few hours, the distal portion of the finger

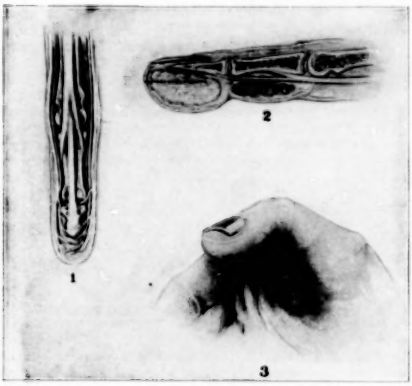

Fig. 1.—Note distribution of arteries.
Fig. 2.—Connective-tissue space distended with wax under pressure. Dotted line where incision would extend
Fig. 3.—Line of incision, one half only shown.

becomes red, swollen, and tender. The last phalanx is at first tense from edema, which is rapidly replaced by induration, and finally within forty-eight hours fluctuation is present.

TREATMENT

Many surgeons teach that it is best to wait for suppuration to take place before opening a felon, meanwhile using ointments of various kinds or hot or cold applications. This method of treatment cannot be too severely condemned, as delay causes the patient much pain, a wider destruction of tissue and frequently the loss of a portion of the bone.

In felons as in every other closed cavity, such as subaponeurotic infection of the scalp or osteomyelitis of the long bones, free and quick drainage is desirable. If then a free and adequate drainage is desired, what method of incision will best suit the present condition? The usual method is a longitudinal incision over the pad of the finger, which is not advisable because it does not allow free drainage, but on the contrary has a tendency to close up and requires packing to keep it open. Packing is very painful and very difficult to keep in place. Another objection to this method is that the incision injures the tactile area and an ugly retracted scar is the result. Kanavel's method, the making of

Fig. 4.—Wound after incision. Method of rapidly introducing rubber tissue.

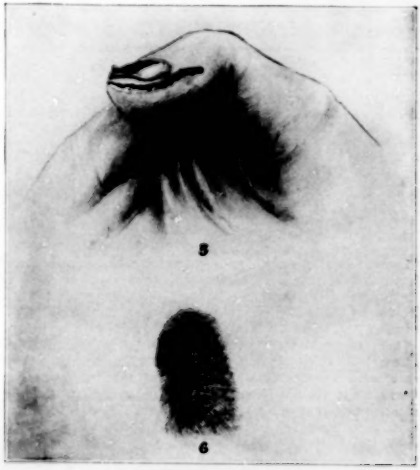

Fig. 5.—Finger ready for dressing.
Fig. 6.—Imprint. Note line of furrows.

two lateral incisions, is much superior to the above, but even this does not give the desired drainage, has a tendency to close up and requires subsequent packing. I have used the incision described below in all my cases and have found it to give excellent results even in severe

infections. It will be noted that no subsequent packing is required. If the patient is operated on early no loss of bone occurs. The scar is almost invisible, being in line with the furrows of the skin, and further does not impair the tactile area. Complete and free drainage is immediately obtained.

For the first few days, the wound will appear to have been more than was necessary, but the final result will quickly dispel any such idea. The incision, which is best shown in Figure 3, starts at the level of the base of the nail on one side and extends in the line of the skin furrows over the tip of the finger, up the opposite side to a point on the level with the beginning of the incision, in that way making a flap of the tip of the finger. A piece of rubber tissue or gauze impregnated with petrolatum is placed in the uppermost angle of the wound as shown in Figure 4.

The wound is dressed with normal salt solution. The dressings, which are kept moist, are renewed every day without removing the packing. On about the third day the rubber tissue will come away and no subsequent packing will be found necessary. This is a great relief to both the patient and doctor. The wound will gradually close and after a period of several weeks the finger will assume its usual size and shape. If the case is seen after suppuration has taken place, it may become necessary at a later date to snip off the diseased diathesis and save the epiphysis. This was seldom necessary in my series of cases.

A general anesthetic (preferably nitrous oxid), is essential, so that a careful, complete and painless operation may be performed. The way these fingers are opened without an anesthetic in the average receiving ward is nothing less than brutal.

2025 Walnut Street.

THE LATER HISTORIES OF FOUR SURGICAL CASES

1. MY FIRST CASE OF BRAIN TUMOR (1887).
2. TWO PATIENTS WITH RECTAL CANCER SURVIVING MANY YEARS; DESCRIBING ALSO A SIMPLE AND SUCCESSFUL METHOD OF DRESSING AN INGUINAL ANUS.
3. TRAUMATIC RUPTURE OF MIDDLE MENINGEAL ARTERY WITHOUT SKULL FRACTURE (1902).

W. W. KEEN, M.D.
PHILADELPHIA

BRAIN TUMOR

CASE 1.—In December, 1887, I removed a large tumor from the brain.[1] It was my first case of modern cerebral surgery. The weight of the tumor was 3 ounces and 49 grains, and its size 2⅞ by 2½ by 1¾ inches, its circumference being 7¼ by 6 inches.

The tumor was a fibroma arising from the dura. Dr. W. J. Taylor has stated[2] that the patient "lived for nearly twenty years" after the operation. This is an unintentional error, for it was 25 years last December since the operation, and the patient was still alive a few months ago. His sight is poor, but is sufficient to enable him to find his way about, though not to enable him to read. He has once in a year or so an epileptic attack in spite of his use of bromids. He is now 50 years old and bids fair to live for some years.

CANCER OF THE RECTUM

CASE 2.—I made an inguinal artificial anus (Maydl), Nov. 5, 1892, and eleven days later resected 6 inches of the rectum, leaving both the inguinal and the perineal openings patent. The cancerous nature of the growth was established by microscopic as well as clear clinical evidence.

The patient, Mr. B. (Case 2 of my original paper[3]), was 32 years old at the date of the operation. He lived until 1906, a period of fourteen years, and then died without local recurrence. It is possible that his death was caused by internal malignant disease, but this was not determined. I never attended him after the operation, though I often saw him socially.

Meantime he had been able to enter into all ordinary business and social life, to travel to Egypt and elsewhere, and to ride a horse and a bicycle. When later I proposed to close the perineal opening where the bowel protruded moderately he declined, for the reason that he was comfortable and had satisfactory control of the contents of the bowel.

CASE 3.—I operated on the patient, Mr. F. (Case 3 of my original paper[3]), Dec. 14, 1892. He was then 46 years of age. As in the prior case, I made an inguinal anus (Maydl) and twelve days later resected 9½ inches of the rectum. Microscopic examination confirmed the clinical diagnosis. The lower (perineal) end of the bowel was left open as well as the inguinal anus. After a time he was so much annoyed by the prolapse of the bowel that he willingly acquiesced in my suggestion to have the perineal opening closed.

Operation and Results.—Feb. 16, 1900: Placing the patient on his right side, I carried an incision through the skin about one-third inch away from the perineal opening of the bowel. I then dissected down to the muscular coat of the bowel immediately at the level of the perineum. By the finger and by blunt dissection and scissors, I was able to detach the complete layer of mucous membrane from the bowel so that it hung down like a cuff. This was then cut off at a level with the muscular coat, and the margins of the mucous cuff were united by a through-and-through catgut suture. This stump was next invaginated, and two rows of Lembert sutures were applied through the muscular coat. I was surprised on releasing my control of the closed end of the rectum to see the enormous cavity into which it retreated. I could easily introduce my entire fist to a distance even beyond my wrist, and yet at no place had the peritoneal cavity been invaded. When the patient was resting quietly this retraction to the bottom of the cavity took place, but the moment that he attempted to vomit, cough or struggle, the stump of the bowel would be pushed down to the level of the perineum or even beyond it. The stump of the bowel was now brought down to within an inch of the surface of the perineum, and the perineal wound was closed with interrupted silkworm-gut sutures, four of which secured the rectal stump in position. If this had not been done, there would have been an immense dead space in which bloody serum would have accumulated and might easily have led to an infection. When the bowel was pulled down, the lax tissues about it filled up practically this whole cavity. A rubber drainage-tube was introduced both anteriorly and posteriorly to avoid this danger of infection.

The operation lasted an hour and three quarters, and was tedious rather than difficult. The mechanical result was most satisfactory to me. The patient's temperature showed no appreciable fall after the operation.

The wound healed by first intention except at two points, one exactly corresponding to the middle of the closed stump of the bowel, the other close by. A very slight discharge of mucus occurred at these points. To avoid danger from downward pressure I kept him in bed till the wound was securely healed. He went home in four weeks.

I have seen and heard from him from time to time. The last occasion was Jan. 14, 1913, a little over twenty years after the primary operation. He is now 66 years old, is perfectly well, and weighs rather more than ever before. His business and social life are normal, except when his bowels are loose. The discharge even then rarely escapes beyond the dressing and soils his underclothing. The result of the operation to occlude the perineal anus is very gratifying. He says of this that "there is nothing to show. It is simply a 'closed incident.'"

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1. Keen, W. W.: Am. Jour. Med. Sc., October, 1888, p. 329.
2. Taylor, W. J.: Tr. Am. Surg. Assn., 1912, p. 361.
3. This was originally reported in the Therapeutic Gazette for April and May, 1893.

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METHOD OF DRESSING INGUINAL ANUS

As he has had so long and so successful an experience in dressing the inguinal anus and in observing the condition of the culdesac from the open inguinal anus to the closed perineal anus, I quote in detail his method of dressing the inguinal anus. This is always a problem of serious import to the patient. Many devices, often cumbrous and costly have been used. Mr. F.'s method is so simple and so effective that I believe a detailed description — for even the little details are important — will be welcomed both by the surgeon and his patient.

The accompanying illustrations well illustrate his present condition. His suggestion of a "dummy" truss has been of great value to other patients after a similar operation. The truss as he says is the "key to the situation."

Mr. F. writes: The bowel ends protrude, normally, about half an inch outside the wall of the abdomen (Fig. 1.) The end of the unused bowel does not vary in size; it is inert. The end of the active bowel is like it when conditions are normal. . . . I have fairly regular movements every morning, depending, of course, somewhat on regular habits of eating and drinking, which also affect the character of the discharges as to their being formed or semi-liquid. . . . My motions are

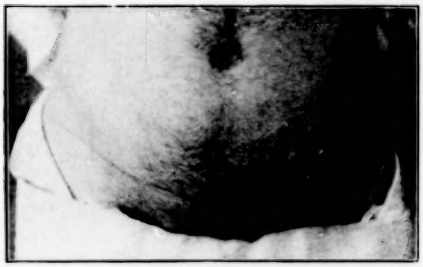

Fig. 1.—The two ends of the divided bowel at the inguinal anus twenty years after operation (Case 3).

never under control as with a normal sphincter. At the same time they give me fair warning. If formed they do not hurry me and in cases of necessity, as when traveling, I can carry a movement for hours. But if semiliquid or worse they must be cared for promptly. . . .

Now, as to protection (Figs. 2 and 3.) You are right in wanting this in detail, for it is that which must take the place of control, and it is the key to the situation. I am sending you under separate cover a T-bandage and pads of absorbent cotton which have served me so well all these years. I have seen expensive surgical appliances of silver cup, rubber tube and reservoir which were of no use at all. Lying on my back with the bandage spread out under me, I first wrap a string of absorbent cotton around the bowel ends. Then I place over the abdomen a layer of cotton about 8 by 11 inches, reinforcing it at the bottom with another strip 3 inches wide to make double thickness. This is better to support the flange at the truss and to increase absorption. Over this pad I lay a smaller piece of cotton or linen cloth—any clean old rags will do—then another sheet of cotton, split thin, then another cotton rag and on this a square about 5 by 6 inches of rubber cloth. These cotton pads extend one-third of their length over the bowel ends to the right and two-thirds to the left and down the side, as it is in the latter direction that the movements spread most.

Then I bring the bandage over from the right side, lap it with the end from the left side and fasten with five safety-pins 1¼ inches long, beginning at the bottom and drawing fairly tight. I then bring up the split ends of the T and fasten each end to the lower edge at the encircling bandage. The bandage should not cover the lower edge of the pads by half an inch. This is a good deal of detail, but it is all-important. The cloth square between the pads catches the moisture which goes through the cotton, and the one under the rubber will be wet while the cotton under it is dry. The rubber protects the bandage when the discharge is profuse. In dressing a movement, I simply fold back the cotton not soiled and gather off

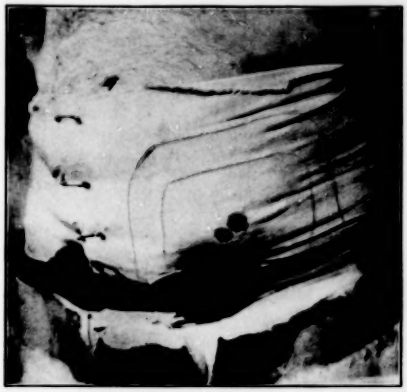

Fig. 2.—Front view showing truss and dressing (Case 3).

Fig. 3.—Back view showing truss and dressing (Case 3).

the feces with a square of soft paper, cleanse with part of the cotton pad and redress with new as may be necessary.

Next, standing, I adjust my truss; and let me say here that a truss is an absolute necessity. It is the only insurance against disastrous leakage down into the clothing of liquid feces. It constricts the lower edge of the bandage, holding it tight to the groin and making the bandage and pads a safe reservoir even with liquid discharges, if they are not too profuse. Of course if they are profuse all pads will be saturated, and sometimes there will be leakage. But it must be a bad discharge that gets so far. You will find a slit in the middle of

the wide bandage. This is to catch the edge of the back flanges of the truss and prevent the truss from slipping down—another important detail. The bandage I send you is made up as I use it. Open it carefully. The patient must keep a few on hand. It is made of 40-inch brown muslin. The strip half as wide as the bandage makes two T's.

The culdesac, which you perhaps considered an experiment, has served its purpose in preventing prolapse of the bowel, leakage of mucus and pain in the surrounding muscular tissue. The discharge from it at the open end is negligible. Once in a great while I find a thimbleful of gray matter, soft and odorless, on the pad. Once I thought there must be some accumulation of it and I tried to void it by hanging down, head to the floor from the foot-rail of my bed and manipulating the posterior end with my hands, but with no result; so I ceased to bother about it. It gives me no pain except sometimes it swells when I strain my abdominal muscles to effect a movement.

HEMORRHAGE FROM THE MIDDLE MENINGEAL ARTERY

CASE 4.—A young midshipman at Annapolis was injured in a football scrimmage. I first saw him three days after the occurrence of the accident.[4] His mental condition at that time was very dull, his headache was severe and he had had convulsions, chiefly in the right arm, though the right leg and entire side had been involved to some extent. Disregarding a bruise, the only physical evidence of injury, I opened his head, Nov. 19, 1902, about 3 inches away from the bruise, and removed nine tablespoonfuls of blood. He made an excellent recovery and, in spite of my injunction to drop back one year in the Academy, he studied extra hard, made up all his lost time, graduated with his class and entered on his career as an officer in the Navy.

Jan. 10, 1909, over six years after the accident, he was examined for life-insurance by Dr. Julius F. Lynch of Norfolk, Va. Dr. Lynch writes me, "I recommended him as a first-class risk and the policy was issued promptly."

A little over a month after the policy was issued he was killed by an explosion in a coal-bunker on the man-of-war then lying in the harbor of Naples. He knew the danger he ran in entering the bunker where there was believed to be a fire, but gallantly faced it, forbidding the men to enter until he himself had explored it.

The surgical interest of the case lies chiefly in the excellent physical condition found after so long a period subsequent to such a severe cerebral injury.

1729 Chestnut Street.

4. This case was published in the Philadelphia Medical Journal, Dec. 13, 1902.

A CASE OF ANNULAR PAPULAR SYPHILIS IN A NEGRESS

HOWARD FOX, M.D.
NEW YORK

It is generally recognized that there are three distinct diseases which are more or less characteristic of the negro race, namely, keloid, elephantiasis and uterine fibroid. It is not so well known that there is a form of cutaneous syphilis, the so-called annular syphilid, which is also strikingly characteristic of the negro. This is an early manifestation of the disease and a modification of the flat papular or discoid syphilid. The lesions apparently begin as flat papules which enlarge peripherally and clear up in the center, forming circular elevated rings. By the coalescence of several rings, various gyrate and festooned patches are produced.

The annular syphilid is not only much more frequent in the colored than in the white race, but when present is much more extensive. The eruption is seen most often on the face, but may also occur on the trunk and extremities, especially the back. It appears as a rule during the first six or eight months after infection. By those who have had experience in observing skin diseases in the negro the diagnosis can generally be made with certainty at a glance. Without such experience the diagnosis of this form of syphilis may be puzzling.

The disease is most apt to be mistaken for ringworm or erythema multiforme. It should not be confused with the annular lesions of late syphilis, which are generally formed by groups of individual nodules. If the specific nature of the eruption is suspected, it is not difficult to confirm the diagnosis, as at this period there are generally other corroborative signs of the disease including a positive Wassermann reaction.

Fig. 1.—Eruption in annular syphilis on right side of face. Note semicircular figures at side of mouth and below nostril.

As I have discussed the subject of annular syphilis in the negro more fully in previous communications[1] I merely wish at this time to report a well-marked example of the eruption.

The patient, M. F., was a full-blooded negress of the Congo type, 19 years of age, born in Virginia. She was unable to give any intelligent description of the onset or course of the eruption. As with the majority of such patients, no history of infection was obtainable. The eruption had first appeared according to her statement about six weeks before the photographs were taken. Though the diagnosis of syphilis was fairly written on the skin, I made a Wassermann test for the sake of the record. It was strongly positive. The patient also presented a moderate angina and a general adenopathy.

1. Fox, Howard: Observations on Skin Diseases in the Negro, Jour. Cutan. Dis., 1908, xxvi, 67; The Annular Lesions of Early Syphilis in the Negro, Arch. f. Dermat. u. Syph., 1912, cxiii, 315.

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The eruption was confined to the face, neck, sternal region and upper portion of the back. On the left side of the face it was especially profuse above the eye, nose and mouth. The most striking lesion was situated near the angle of the mouth. This consisted of a perfect circle, an inch in diameter, enclosing two other less perfect circles. The same tendency to form rings within rings was less shown in a patch above and to the outer side of the left eye. On the right side of the face there were several semicircular figures at the angle of the mouth and along the border of the jaw. A very characteristic lesion was present on the upper lip just below the nostril. This was a delicate semicircular ring with its convex border toward the mouth, which I have observed to constitute in another case the sole cutaneous manifestation of the disease. On the sides of the neck and over the manubrium and upper part of the back were other circinate and gyrate patches. One of these on the

Fig. 2.—Eruption on left side of face. Note perfect circle enclosing circles at side of mouth.

back showed an abortive attempt to form five concentric circles.

The patient was difficult to control and left the clinic before the eruption had disappeared.

I am indebted to Dr. George T. Jackson for the privilege of reporting this case from his former service at the Vanderbilt Clinic.

616 Madison Avenue.

Endemic or Epidemic Poliomyelitis.—Although we refer to poliomyelitis as "epidemic," its incidence in any large population is always small even during epidemics. Occasionally, in a small group of people, a large percentage may be attacked, but considering any large group, as the population of a city, a county or a state, the attack-rate, even in so-called epidemics, is seldom more than one per thousand, usually even less.—W. H. Frost, *Am. Jour. Pub. Health.*

SPASMODIC TORTICOLLIS

NOTES ON THE ETIOLOGY IN TWO CASES *

WALTER F. SCHALLER, M.D.
SAN FRANCISCO

I employ the term "spasmodic torticollis" generically and do not wish to be understood as classing all conditions presenting this symptom (for it must be borne in mind that torticollis is a symptom and not, properly speaking, a disease) as a spasm. In fact, the object of this paper is to analyze the symptoms of two cases, which have come under my notice recently through the kindness of Dr. Emmet Rixford, in order to determine if possible whether we are dealing with a tic or a spasm.

Accepting the classification of Brissaud, we define a spasm to be a reflex movement due to an irritation somewhere along the pathway of the peripheral reflex arc; while a tic has its origin in the higher psychic functions and is the uncontrollable and often unconscious imitation of a purposive act. I shall recall the chief points of difference between a tic and a spasm by comparing their symptomatology. The mental state of the ticquer has often been noted. Whatever the ticquer's age, he presents the mental state of a lower age. He is apt to be poorly balanced in his attainments. The volition is weak and unstable. Impulsive manifestations are common. The ticquer is apt to be impatient. The emotions are often difficult of control. Obsessions are common. Together with the mental instability, there is often a motor instability manifested by a difficulty in conserving the immobility. These psychopathic symptoms do not form part of the picture of spasm.

The volition, efforts of attention and distraction modify a tic and may cause its temporary cessation. This does not happen in a spasm.

Tic is often preceded by an imperative desire, and the performance of the tic is followed by a feeling of satisfaction.

Certain antagonistic movements not of a forceful nature may be sufficient to control a tic, while these movements are quite inadequate in a spasm. I shall refer more in detail to these antagonistic movements in the case reports.

A tic ceases during sleep, a spasm persists.

The convulsive movements of a spasm are extremely brusque, resembling the muscular contraction caused by the electric current. The muscles involved correspond to the anatomic distribution of a nerve. If a portion of one nerve is involved the spasm may be partial or even fascicular as seen as a complication of facial paralysis. If the whole nerve is affected the convulsive movement may be quite unlike that produced by the performance of a purposive act. Thus Babinski has noted an asynergia of the muscular movements in cases of facial spasm, and called this condition paradoxical synergia.* In this condition the forehead of the affected side is wrinkled by action of the frontalis muscle, while the eye is closed due to the action of the orbicularis palpebrarum, both of these muscles being innervated by the same nerve, the facial. This combination of movements cannot be produced simultaneously by effort of the will. A tic, on the contrary, is often a complicated associated movement calling different nerves and

*From the Neurological Clinic, Medical Department Leland Stanford Jr. University.

*Read at the meeting of the San Francisco County Medical Society, Jan. 21, 1913.

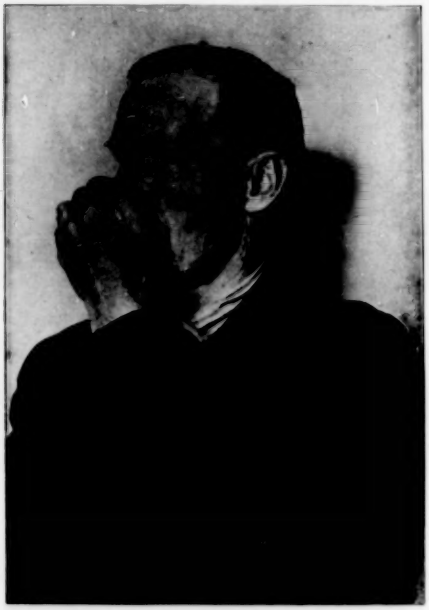
their muscles into play and has for its object an act with a definite purpose.

Pain properly speaking may be the accompaniment of a spasm, but not of a tic.

A true tic is variable in intensity, varying from one day to another. A true tic is often benefited by treatment properly directed, such as exercises of control and due attention paid to the psychic elements of the case. A spasm is not influenced by the same methods.

The importance of a correct diagnosis is therefore evident, as the treatment of these two affections is entirely different. Let me bring out the chief points in the case histories of my two patients.

Case. 1.—J. R., aged 47, unmarried, a laborer, is not handicapped apparently by hereditary nervous influences, as we can



The *geste antagoniste efficace.*

find no evidence of nervous or mental disease in his family history. As a child he was robust physically but inclined to be "nervous." He relates a story of how as a boy he went to have his picture taken. The ordeal of "posing," as he expresses it, caused an uncontrollable turning of his head to one side which was similar in some respects to the affection of which he now complains. He states that he is reserved and even bashful in company. He is of a retiring disposition but not a person whom one would call nervous in the generally accepted meaning of the term.

Present Trouble.—This dates back five years. It consists in an uncontrollable tonic contraction of the muscles at the back of the neck causing the head to turn to the left side. This movement is accompanied by some soreness in the muscles affected but there is no definite pain. In referring to our notes we find that this affection began after a particularly hard journey to Alaska where he also had financial difficulties associated with a mining claim. It appears that he was under considerable mental stress at that time. There is no history of his suffering from any illness. In searching for the pathogenesis of the affection the following was brought out. At first the head was inclined to turn to the right. To correct this, the patient conceived the idea of changing his position while working with his shovel (being right-handed his head followed the movements of his shovel to the right). He now changed his position and shoveled to the left, the head now turning to the left while he worked. Not only did he correct the torticollis to the right but he overcorrected it, and the head assumed the position to the left which it continued to occupy during the first attacks. After vainly seeking relief by internal medication, he placed himself in the hands of a Seattle surgeon who performed several operations on the left side of his neck. The scars of these operations are still plainly seen over the attachments of the sternocleidomastoid and trapezius muscles. These operations afforded the patient no relief. He later came under the care of Dr. Rixford. Dr. Rixford performed an operation directed toward removing the function of the splenius capitis and complexus muscles of the affected side. The operation was successful and the patient was much benefited. This last operation was performed about three years ago. About six months before the patient first came under my observation in November last, a torticollis set in on the opposite side, the right.

Examination.—The patient presented a torticollis due chiefly to the spasmodic contraction of the sternocleidomastoid and the trapezius muscles of the opposite side but it was observed that the elevation of the chin generally noted was very little marked. Pain was complained of in the muscles in the back of the neck on the left side. The head could be held directly forward without difficulty when the patient was at rest, as while sitting; as soon as walking was attempted the tonic contractions would take place. When he was asked to turn his head to the right side it would be spasmodically fixed in this position in spite of all effort to restore it to the original position by means of antagonistic muscles. But now the remarkable fact: If the patient would grasp the tip of his nose the head could be replaced by an exercise of force evidently too slight to overcome an actual spasm of such powerful muscles as those in question. We are dealing here with a symptom which Meige and Feindel in their monograph on tics speak of as *geste antagoniste efficace.* A physical examination showed no evidence of any organic or other disease present. No local cause could be found to account for the affection. The spinal column appeared normal. There was no history of rheumatism. The eyes were examined and found normal in every respect.

Diagnosis.—In view of the facts brought out, the psychic torticollis in childhood, the pathogenesis of the first attack and the means the patient takes to overcome the tonic spasm, a diagnosis of tic was made, or of torticollis mental of Brissaud.

Treatment and Course.—The treatment for this condition was instituted but was not followed by very satisfactory results, although some improvement was noted. The pain in the neck persisted. At the urgent request of the patient a radiograph of the cervical spine was taken. Proliferation of bone at the level of the fifth cervical vertebra was seen. Treatment was now instituted for an osteo-arthritis of the spine, and the possibility of a spasm due to an irritation of the spinal nerve roots was considered. Internal medication with the salicylates and potassium iodid, counter-irritation over the spine and spinal galvanization were in turn employed without beneficial results. Finally extension was used but with no better success. What help we were able to render this patient came from the treatment instituted for tic.

Case. 2.—C. E. R., aged 37, married and the father of two healthy children, is an inspector in the customs service and is assigned to night duty. He is apt to have insufficient sleep and his meals are often taken at irregular hours. In order to keep awake at night he has been in the habit of taking considerable coffee. Factors of importance to be noted in his history are that a brother of the patient is very eccentric in his conduct and at times does not appear to be perfectly nor-

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mal mentally. His mother is what the patient calls "nervous" and on several occasions has had a nervous breakdown. The father died of arteriosclerosis at the age of 74. Besides the usual diseases of childhood the patient has had diphtheria and dysentery. In Manila in 1899 he had malaria. Following this he had two attacks of what he termed rheumatism. In 1909 he had an attack of pneumonia. The patient is said to have been rather backward at school and stammered when a boy, a habit from which he has not entirely recovered. He has remained in his present employ for a number of years without promotion. Whether deserving of promotion or not, the fact that he has not made any progress in his work has been a source of considerable chagrin to his family and himself. He is at present in a controversy with the customs department with a view to having day duty. In addition he has a source of worry in the settlement of his father's estate.

Present Trouble.—The torticollis from which our patient is a sufferer had its beginning directly following his return with the California Volunteers following the Spanish-American War. On account of his illness in Manila and the hardships of the life to which he was exposed, his health was considerably impaired. He had lost much in weight. His mother stated that his trouble began with a movement of his left hand to the neck and a slight rotation of the head. In 1902 the trouble had progressed to such an extent that the patient applied to Dr. Rixford for relief. At this time the head would incline almost to contact with the right shoulder, and while walking he was continually obliged to support the head with the hand of the same side. Several operations were done in which the spinal accessory nerve, the second cervical nerve, the sternocleidomastoid and trapezius muscles and finally the entire muscular mass involved in the contraction were divided. These measures were successful and the patient was relieved of his trouble until September of last year when there was a recurrence on the opposite side. It was at this time that I first saw the patient.

Examination.—There was an inclination of the head toward the left shoulder and a rotation toward the right shoulder with elevation of the chin. The head could be brought to the median line by a maneuver similar to the one employed in the first case; in this instance the gesture was with two fingers of the left hand. A very slight pressure thus applied was sufficient to redress the head. A point of tenderness was found at the exit of the great occipital nerve on the left side and spontaneous pain was complained of in this locality. When questioned as to the character of this pain, as to whether it was a soreness or a pain properly speaking, he found it difficult to determine this point. The patient's wife stated that the torticollis was less when his attention was diverted. During a performance at the theater, for instance, the torticollis has been observed to cease for the time being. The information was also obtained that the movements ceased during sleep, a very important point. The pathogenetic factor in this case was searched for and it was learned that before the torticollis was definitely established the patient noticed certain cracklings in his neck which were of some concern to him. He acquired the habit of reproducing these by movements of the head resembling the movements which have now become involuntary. Certain mental states aggravate his trouble. When he is annoyed and worried the torticollis is worse. In the physical status the only positive finding of importance was a systolic murmur at the base of the heart. The heart was not enlarged. The red blood-count was 4,500,000 and the hemoglobin was 65 per cent. by the Sahli instrument. The urine was normal. A radiograph taken of the cervical vertebrae showed nothing abnormal.

Treatment and Course.—Treatment was directed toward regulating the daily routine. The patient was advised to avoid all stimulants, such as the excessive use of coffee mentioned before. The importance of sufficient sleep and of regular hours for his meals was emphasized. He was told of the psychic element in the production of his affection and was told that in the method of treatment to be followed his active cooperation was necessary. The drugs to be given were in no sense curative but were in the nature of tonics. Three times a day he was to practice his exercises before a mirror as advised by Meige and Feindel. Furthermore, he was told to endeavor to control those emotions which he recognized had a tendency to aggravate his trouble. The torticollis seemed to improve at times and at others seemed to be stationary. Of late, however, there appears to have been a decided improvement permitting us to believe that we are on the right track and that the patient is being rewarded for the conscientious carrying out of the directions given.

SUMMARY

It will be seen that I have dwelt on the psychic symptoms in these two cases at length. I have done so because they stand out prominently in the histories of the cases and dominate the clinical picture. Both these men are neurotic. The character of the torticollis resembles that of a tic in the pathogenesis, in the character of the contraction (being a movement due to a tonic contraction, slow and resembling a definite movement adapted to a purpose, as opposed to a quick jerking movement resembling that due to the response to an electric current), in the absence of any severe pain and in the control of the movement by maneuvers which would be quite inadequate in a spasm.

It has been the object of this paper to throw some light on the nature of the affection in these two cases. I think that torticollis is very often to be classed as a tic.

126 Stockton Street.

PELLAGRA: SOME FACTS IN ITS EPIDEMIOLOGY *

R. M. GRIMM, A.M., M.D.
Passed Assistant Surgeon, United States Public Health Service
SAVANNAH, GA.

The purpose of this article is to present a few facts in the epidemiology of pellagra. These facts pertain to 323 cases of pellagra which were seen by me during the summers of 1911 and 1912 while engaged in the pellagra field-work undertaken by the United States Public Health Service. The object of this field-work was primarily to collect data which would show the character of the home environment of the pellagrins and the nature of the conditions under which the disease was developing; in short, to make a study of the disease from the standpoint of hygiene. It was thought that information bearing on these points, in a large series of cases, might be of some value in indicating a direction for some line of investigation which might possibly lead toward the discovery of the cause of the disease, or of a method of its transmission. With these points in view the facts in this article were collected and have been recorded here, with the hope that they may be of some interest now and of some value in the future, when supplemented by data from other sources.

During the progress of my work 200 or more physicians of Kentucky, South Carolina and Georgia were consulted, 296 pellagrous homes visited, and 323 pellagrins personally interviewed. The visits to the homes of the pellagrins were always made in company with the family physician. This rule was strictly adhered to. For collecting the data case-cards measuring 5 by 8 inches were used. These cards were numbered serially and are now on file. On the cards are spaces for notes pertaining to the following points: name, address, race, sex, age,

* Modification of paper read at the second triennial meeting of the Association for the Study of Pellagra, Columbia, S. C., Oct. 3, 1912.

nativity, marital condition, occupation, family history, personal and pellagrous history; date and place of onset of first and of subsequent attacks; number and health of other members of the family; relation to other cases, and any facts bearing on heredity and contagion. In each instance an attempt was made to get some idea of the character and source of the food and water which had been used in the families. During the visits to the homes of the pellagrins notes were taken on the economic condition of the families and on the sanitary condition of the houses and premises. The relation of the homes to water-courses was noted, and also any other fact or circumstance which at the time seemed pertinent. On slight consideration it will be readily realized how many questions might be asked and what confusion of detail is possible, so that it was only between certain limits that the facts have been collected which I have attempted to put into communicable form in this article.

Geography, Topography, etc.—During my work visits were made to districts in twenty-five counties in which pellagra had been reported prevalent — three in Kentucky, seven in South Carolina, and fifteen in Georgia. The Kentucky counties visited are located in the southeastern portion of the state, which is a mountainous coal mining section. The other counties are located in the northern, the western, and the southern portions of South Carolina and Georgia and belong to the rich agricultural sections of these states. The main industries there are the growing and the weaving of cotton, but considerable attention is also paid to the cultivation of corn. The elevation of the counties visited varies from about 1,000 feet above sea level in Kentucky and north Georgia down to almost sea level in the southern portion of the latter state. Cases of pellagra were found to have developed at practically every elevation between these limits, but more cases were seen in the rolling upland sections than in either the mountainous or low country. All of these counties are well watered and possess good natural drainage, as is indicated by the presence of numerous streams flowing through them. Small ponds and swamps, however, are present in practically all of them and these are especially numerous in the lowlands of south Georgia, where a few of these cases developed. The climate of south Georgia may be termed subtropical, that of the other sections visited temperate and never extreme.

CONSIDERATION OF CASES

Distribution.—The 323 cases of pellagra which form the basis of this article are distributed among the three states as follows:[1]

Kentucky (three counties)	38 cases
South Carolina (seven counties)	161 cases
Georgia (fifteen counties)	124 cases
Total	323 cases

Race and Sex.—With reference to these points the cases are as follows:

	No.	Percentage.
White females	209	64.7
White males	91	28.2
Colored females	14	4.3
Colored males	9	2.8
Total	323	100.0

1. These numbers are approximately in proportion to the lengths of time spent in each state, and should not be taken as indicating comparative prevalence. In addition to this number there were reported to me by physicians in these counties 672 non-fatal and 431 fatal cases which make a total for the 25 counties of 1426 cases. All of these cases were considered in my official report to the Surgeon-General (Public Health Reports, March 7 and 14, 1913).

In the Kentucky counties which were visited negroes are in the minority, but in the South Carolina and Georgia counties they form a much larger proportion of the population and in places equal if not outnumber the whites.

Age.—According to age the 323 cases are grouped as follows:

Age.	No. Cases.	Age	No. Cases.
0 to 5 years	15	45 to 50 years	23
5 to 10 years	23	50 to 55 years	21
10 to 15 years	11	55 to 60 years	20
15 to 20 years	12	60 to 65 years	11
20 to 25 years	42	65 to 70 years	8
25 to 30 years	34	70 to 75 years	4
30 to 35 years	37	75 to 80 years	1
35 to 40 years	38	Above 80 years	0
40 to 45 years	23		
			323

Marital Condition.—The marital condition of these pellagrins is as follows:

Single	83,	males 43,	females 40
Married	208,	males 50,	females 158
Widowed	32,	males 7,	females 25

Date of Onset.—On account of the vague nature of the early symptoms of the disease it was impossible to determine the exact date of the onset of the first attack in all of them. The year of onset, however, was determined in 317 of the 323 cases, but the month of onset was determined with a fair degree of accuracy only in 181 of them. The dates as determined with reference to the years and months are given below with the number of cases having their onset in each.

Year of Onset.	No. Cases Seen in 1911.	No. Cases Seen in 1912
1912	0	53
1911	65	86
1910	30	29
1909	7	21
1908	8	5
1907	3	2
1906	2	1
1905	3	0
1902	1	0
1900	0	1
Not determined	2	4
Total	121	202

The month of onset of the 181 cases is shown in the following table:

Month of Onset.	No. Cases.	Month of Onset.	No. Cases.
January	2	July	25
February	11	August	14
March	18	September	4
April	27	October	5
May	37	November	2
June	36	December	0
			181

Occupation.—There is given below a list of the occupations which constituted the source of income of the families furnishing this series of cases, along with the number of cases in each group:

Occupation	Total No. Cases	Men	Women	Children under 15
Factory	148	31	97	20
Mining	26	5	15	6
Agriculture	48	12	29	7
Trade	23	11	6	6
Clerical	18	8	5	5
Railroad employment	5	2	1	2
Professional work	5	2	2	1
Miscellaneous (laboring)	45	6	36	3
Without occupation	5	5	0	0
Total	323			

V. 6
1913

Environment and Living Conditions.—Examination of the list of occupations given above will furnish some idea of the general status of the people among whom the cases of pellagra in this series developed. The factory people were mostly of the cotton-mill class, a class quite common in South Carolina and Georgia. These people live in little villages located around the cotton-mills in which they work. Very few of them own their own homes or seem to care to, but live in cottages owned by the milling companies. They are nomadic in character and move from village to village as the notion strikes them. As a class they appeared to be poor, overworked and underfed, and to be living on what they earned from day to day or week to week. Although in many instances the total earnings of the working members of the families appeared quite sufficient for comfortable living, they did not seem to understand the art of applying this income towards the betterment of their living conditions. Many of the women and girls of this class work in the cotton-mills and contribute to the support of their families. Early marriages and large families are the rule among them. In the counties of South Carolina and Georgia which I visited pellagra was found to be much more prevalent among the people of this class than among those of any other. In some of the villages visited the pellagra situation was alarming.

The pellagrins among the mining class were for the most part members of families of coal-miners. They were living in small houses and shacks owned by the mining companies and located on the hillsides near the coal-mines. They were found to be living a hand-to-mouth existence, depending for their support on the daily wages of the workers in the mines. The majority of them were living amid squalid surroundings, and many of them lacked even the rudiments of an ordinary school education.

The forty-eight pellagrins of the agricultural class were mostly of families of "renters" or "croppers." Some were land-owners, a few of whom appeared prosperous. Many, however, were typical "Georgia crackers." The majority of the pellagrins in the remaining groups, while living in towns and in an environment somewhat better than that found in the mill villages and mining camps, still were living under conditions far below the average. A few, however, were enjoying the comforts of an environment which was far above the average.

Economic Condition.—An estimate of the economic condition was made in each instance. The results of these estimates are shown below:

Economic condition	No. Cases
Poverty	258
Comfort	59
Affluence	6
Total	323

CONSIDERATION OF HOMES

Location.—A classification of the homes is given here with reference to location:

A. With reference to population (at time of onset).	No.
In a cotton-mill village	142
In a coal-mining camp	24
In a town or suburbs	92
In the country	58
In a city	7
Total	323

B. Distance from watercourses (at time of my visit).	No.
0 to 50 yards	31
50 to 100 yards	35
100 to 200 yards	49
200 to 500 yards	118
500 yards to 1 mile	51
1 to 3 miles	10
Distance not determined	29
Total	323

Sanitation.—The sanitary condition of the homes of the pellagrins in this series has been classified as follows:

Sanitary condition	No.
Good	11
Fair	36
Bad	249
Not visited	27
Total	323

GENERAL CONSIDERATIONS

Insects.—From the standpoint of entomology the great majority of the pellagrous homes visited in this work would, without doubt, have furnished interesting material for study. The ordinary bedbug was found to be present in some of the homes, was acknowledged to be present in others, and in very few indeed were conditions such as to lead one to suspect the absence of this and of other ectoparasites of man. It was the exception to find a pellagrin living in a screened house, although mosquitoes were said to be present in all of the districts visited. Malarial fever was reported to be common in some of the districts, but in others it was said to be practically unknown. Ordinary houseflies were present in practically all of the homes visited and were especially numerous in many of those where a pellagrin was confined to bed. The fly *Simulium* was found to be breeding in a number of the districts, but was not looked for in all of them. Two granaries, from which corn had been taken for families in which pellagra had developed, were inspected and were found to be heavily infested with weevils and moths.

Water-Supply.—The source of the drinking-water at the time of the onset of the disease in these cases was determined and is as follows:

Source	No.
Wells: Bored	50
Dug	109
City or town supply	62
Well and city supply	12
Cisterns (stored rain-water)	6
Surface water (wells, creeks, springs)	66
Varied	18
Total	323

Food.—It was learned that the great majority of the pellagrins in this series had been subsisting almost exclusively on food bought at the stores. The families among the cotton-mill and coal-mining classes were practically entirely dependent for their supplies on the small stores in the villages and camps, and despite the rural location of the homes of the pellagrins of the agricultural class they too were found to depend to a considerable extent for their food on the country grocery store. It was the exception to find a pellagrin who could state that even the major part of the food used in the family had been home grown. Necessarily the lines and quality of the groceries sold at these stores are regulated largely by the finances, the tastes and demands of the patrons, and judging on this basis it can be said that the quality of goods sold at most of

these stores was certainly not of the best, nor were these goods of the freshest. A list of articles of food having the largest sale at a store patronized by a number of people in whom pellagra had developed was made up for me by the store-keeper. This list, although presenting considerable variety, showed that much of the food used had undergone some process for its preservation, such as dessication, canning, etc. It seemed to be the consensus of opinion of the doctors practicing among these people that most of them were not receiving the proper quality and quantity of food, and that even when obtained in sufficient quantity it received hasty and incomplete culinary preparation. No constant difference, however, was found to have existed between the diets of the pellagrous and non-pellagrous members of the families.

Indian Corn.—Each one of the pellagrins considered here gave a history of the more or less regular use of corn products as articles of diet. Some acknowledged only a limited use of them, while others stated that they had "lived on corn-bread and hominy." Hominy and meal seemed to be the forms of corn in most common use, and in all except three instances some of the meal used by the pellagrins previous to the onset of the disease had been obtained at the stores, and in most instances all of that used had been so obtained. The stores were found to handle both locally grown corn and corn and meal imported from other states. The local mills of the districts visited were also found to grind both kinds, so it was practically impossible to determine the relative amounts of each which were being used by the people. In considering the subject of corn in its possible relation to pellagra in the districts visited, it must be remembered that these districts belong to the great corn-eating section of the country, where for many years corn, in one form or another, has been one of the main articles of diet for all classes, and where for many years the demand for corn has not been equaled by the local supply. This situation implies importation, which often requires considerable time for transportation, storage, and handling.

Relationship Between Cases.—Some of the gross relationships of the cases were determined by asking the pellagrins questions bearing on this point. These have been classified and appear below:

	No.
1. Case relationship in the families (same houses):	
A. Families having 1 case	264
B. Families having 2 cases	23
C. Families having 3 cases	6
D. Families having 4 cases	2
E. Families having 5 cases	1
2. Propinquity and contact relationships (miscellaneous):[2]	
A. No known relationship to another case of pellagra	91
B. Previous to onset had temporary association (as visit) with another case of pellagra	24
C. Onset while living in the immediate vicinity of a pellagrin	148
D. Onset while living in the same house with a pellagrin	50
E. Onset while living in a house previously occupied by a pellagrin of another family	10
3. Relationships in food-supply (stores):	
A. Stores among whose patrons 1 case of pellagra developed	43
B. Stores among whose patrons 2 cases of pellagra developed	13
C. Stores among whose patrons 3 cases of pellagra developed	6
D. Stores among whose patrons 4 cases of pellagra developed	4
E. Stores among whose patrons 5 cases of pellagra developed	4
F. Stores among whose patrons 7 cases of pellagra developed	2
G. Stores among whose patrons 10 cases of pellagra developed	1
H. Stores among whose patrons 13 cases of pellagra developed	1
I. Stores among whose patrons 19 cases of pellagra developed	1
Total number of stores	75

2. Includes B, C, D, and E in Group 1 above.

These seventy-five stores were located in nine of the districts which I visited and in which pellagra was especially prevalent. It is believed that a complete canvass of the patrons of these stores, had it been possible to make it, would have brought to light more cases of pellagra than were actually seen. In these nine districts, as well as in others, the doctors reported to me many cases of well-developed pellagra which I was unable to see, and besides in these districts there were quite often seen persons who presented symptoms which greatly simulated those of pellagra, but to a degree not sufficient for a positive diagnosis. The presence of these borderline cases seems to me to be of considerable importance in considering the pellagra situation in a family or in a community.

Heredity.—None of my observations in this work has led me to believe that pellagra is hereditary. Of 58 children whose mothers had developed pellagra within one year after the birth of the child, 9 were dead (cause undetermined), but none was pellagrous; of 18 children whose mothers had developed pellagra within one year before the birth of the child, 2 were dead, but none of the living was pellagrous. Of 30 infants, who were being nursed by pellagrous mothers, none was pellagrous at the time of my visit, 6 were not well, and 24 were healthy.

Predisposing Conditions.—Of the diseases which were reported to me by the pellagrins and their physicians as belonging to their prepellagrous history and which seemed to have favored the onset of the disease may be mentioned the following: typhoid fever, septicemia, pneumonia, asthma, whooping-cough, pulmonary tuberculosis, renal tuberculosis, malarial fever, syphilis, hookworm disease, small-pox, measles, alcoholism, morphin habit, lead-poisoning, diseases of the digestive system, as "indigestion," chronic constipation and others which might easily have been some of the early symptoms of pellagra, fistula, diseases of the gall-bladder, Bright's disease, anemia, muscular atrophy, poliomyelitis, paralysis, epilepsy, migraine, neurasthenia, arthritis deformans, "rheumatism," idiocy, imbecility; those referable to the sexual organs and reproductive function in the female, as puerperal fever, eclampsia, salpingitis, lacerations of the perineum, menstrual disturbances, pregnancy and lactation. Operations and injuries seemed to figure to no small extent. Mental states, such as grief and worry, seemed to have paved the way for the development of pellagra in a number of instances. In not a few instances, however, it was not possible for me to determine, at least in the limited time at my disposal, just what might have acted as a predisposing cause.

The fact that 258 of the 323 of these pellagrins developed the disease under conditions of poverty cannot be without significance. The conditions of living, found in the great majority of these instances, includ-

ing lax domestic and personal hygiene, and especially the questionable character of their food, seemed to have favored in some way the development of pellagra. I am inclined to think that the food used by these people contained elements which acted as a contributing cause of the pellagra among them, and probably also as the exciting cause.

SUMMARY

From the facts in the foregoing article summaries may be made with reference to the following points:

Race.—More cases developed among the whites than among the negroes.

Sex.—More cases occurred among the females of both races than among the males.

Age.—More cases developed at ages between 20 and 40 years than at other ages.

Marital Condition.—Among the married and widowed pellagrins the females predominate; the single pellagrins are equally divided between the sexes.

Dates of Onset.—More cases had their onset during the months of May and June than in other months, and more in 1911 than in any previous year.

Environment.—More cases developed under conditions of poverty than of comfort, and more under conditions of comfort than of affluence.

Relationship of Cases.—More cases developed in the vicinity of other cases than otherwise.

Heredity.—None of the facts seem to indicate that pellagra is hereditary.

Food.—The food used by the people in whom pellagra is prevalent deserves consideration as a possible etiologic factor.

The most promising field for the investigation of the etiology of pellagra is the food being used by the people in whom pellagra is developing.

Marine Hospital.

Therapeutics

PRESCRIPTION NONSENSE

The following is an actual prescription submitted for criticism by THE JOURNAL:

℞	Bismuth subnitrate	ʒ iv
	Bismuth subgallate	ʒ iv
	Sodium bicarbonate	ʒ ii
	Codein sulphate	gr. viii
	Morphin sulphate	gr. ii
	Chloroform water	ʒ iv
	Essence of pepsin q.s. ad	ʒ iv

M. Sig.: ʒ ii every three hours.

The most self-evident mistake in this prescription is the absurdity of combining the action of codein and morphin. The action is very similar, with a little less liability of the codein causing constipation and drying up the secretions. On the other hand, one should decide whether one wishes the codein action or the morphin action, remembering the above-mentioned slight difference and the fact that codein does not stop pain as does morphin, unless the dose is very large. The dose above advised would give the patient every three hours about 0.04 gm. (⅔ grain) of the codein and 0.01 gm. (1/6 grain) of the morphin. This means, when administered every three hours, a large dose of these narcotics. It should be remembered that although 2 fluidrams are ordered, unless a measuring glass is used, the patient will get 2 teaspoonfuls at a dose, and 2 teaspoonfuls represent 10 c.c. or more than 2 fluidrams. In other words, the prescription given above amounts to about twelve doses.

It would not seem good judgment to combine the subnitrate of bismuth with the subgallate of bismuth. If one is needed the other is not. The subgallate is a little more astringent than the subnitrate, but a combination of the two is rarely needed. In the next place, the administration of these two insoluble drugs in a liquid is almost inexcusable. Even a mucilage, or glycerin, or other thick suspending medium would hardly cause an equal dosage of the bismuth. The bismuth will stick in the bottom of the bottle, cling to the sides, and even with persistent shaking there will be irregular amounts of bismuth in each dose. Either the bismuth subnitrate or the bismuth subcarbonate or the bismuth subgallate should be selected, and then it should be administered either in powder or in wafer. There is an ounce of the combined bismuth, that is, 32 gm., to be administered in about twelve doses.

Of course it is presumed that the 4 drams of chloroform water means 4 fluidrams. The chloroform water will certainly give a characteristic taste to the mixture. Chloroform water, however, is very uncertain. From the Pharmacopeia it is not clear exactly how much chloroform will be found in the 4 fluidrams of chloroform water. In other words, it is much better to add as much of the official spirits of chloroform as is desired by the physician.

The object of the essence of pepsin is, of course, uncertain. No fluid preparation of pepsin is sufficiently dense to suspend the insoluble bismuth. Also, it is a mistake to think that a dash of pepsin will aid in causing the stomach to care for a multiple mixture or for an irritant drug. There are no irritant drugs in this preparation, and it is not necessary to cause the patient to pay for an expensive preparation of pepsin in order for the above drugs to be administered. As a digestant the pepsin would be useless when combined with the sodium bicarbonate (as an alkali prevents the activity of pepsin), and it could not well act when combined with such sedatives as codein and morphin. Also, it is not certain what the chloroform would do to the pepsin. In a nutshell, the above prescription does not represent good practice from any standpoint.

A LAST PLEA FOR A USEFUL PHARMACOPEIA.

OLIVER T. OSBORNE, M.D.
Professor of Therapeutics at Yale Medical School
NEW HAVEN, CONN.

Shall we have the United States Pharmacopeia up to date and of scientific and therapeutic value, or shall it be a book of ancient drug lore intermixed with drugs of real value?

It is now nearly three years since the Pharmacopeial Convention of 1910, and what has been accomplished? Many of the drugs which have been approved have already been announced, and, as it has wisely been determined that a subject of such wide, almost universal, interest as the United States Pharmacopeia should not be made a secret affair—in other words, that its decisions should be public, what follows is not a breach of confidence. The subject, in every detail, is one of public interest, and, therefore, should be of public knowledge.

In this age of exposure of "patent-medicine" frauds, and the age of education as to the danger of some drugs,

the uselessness of others, and the limitations of all, the people have a right to expect that the next Pharmacopeia will be a book that can be relied on as a standard of purity and of chemical and pharmaceutical perfection in all its drugs and preparations. They have a right to expect that this book will represent the drugs found by medical experts to be of the best therapeutic value at this date, namely, 1913 A. D.

Can there be any other guide for the acceptance of a drug or preparation for officialization in an up-to-date book of this age than that:

1. The drug must have therapeutic value.
2. The drug must be pure.
3. The preparations must be the best.

What, then, determines the best drug? Investigations in the laboratory and clinical experience—and almost every drug that is known to have clinical value shows laboratory activity. If a drug has no activities, or only dangerous activities when used on animals in the laboratory, it is not a drug that should be dignified by recognition in a 1913 book of standard valuable drugs.

SELECTION OF DRUGS FOR THE PHARMACOPEIA

At the convention in 1910 it was stated that the selection of drugs was peculiarly the duty of physicians, while the selection or determination as to which were the best preparations, and how they should be made, was the duty of the pharmacist. How has this been lived up to?

In the first place, fifty members of the Pharmacopeial Convention were elected a Committee on Revision. Of these fifty, only six are practicing physicians; i. e., only six members of this Committee on Revision are qualified to judge at the bedside of the value of the action of a drug, although several members are medical laboratory men and are well qualified to decide on the activities of drugs.

Next, through the stimulation of various agencies, many of the medical societies of the country appointed special committees who prepared lists of drugs they considered valuable, and of drugs they considered should be omitted from the next Pharmacopeia. These lists, in due time, reached the office of the chairman of the Committee on Revision, Professor Remington, and he, at great office trouble and considerable expense, circularized these lists to the Committee of Fifty.

To show how helpful these lists of drugs were, I will quote the opinion of one member of the Revision Committee, not a physician, concerning them, which was circulated to all of the members of the committee. This circularized opinion (italics mine) is as follows:

> *"The Revision Committee may wisely forget about nine-tenths of the well-meant advice which has come to it . . . .* thankful for the interest shown by an increasing number of physicians."

How many other members of the Committee on Revision agreed with this opinion I am not able to state, but the outcome of the present list of accepted drugs and preparations for the next Pharmacopeia shows that the Executive Committee, the committee of final decision as to what drugs shall appear in the next Pharmacopeia, did not care an iota what drugs these medical societies approved or what they disapproved. In other words, little if any notice was taken of these lists so carefully prepared by some of the medical societies of the country. Those who prepared these lists should know this fact.

The approval by the Executive Committee of drugs of no therapeutic value and their consequent officialization causes them, of necessity, to be described in text-books on materia medica and consequently to be used by physicians. A study of 117,000 prescriptions collected from different parts of the United States showed the number of times therapeutically useless drugs were ordered. The data thus obtained has been used as an excuse for officializing these drugs in the next Pharmacopeia. These will again be copied and described in materia medica books, and the next graduates in medicine will again prescribe these drugs, and the vicious cycle will persist.

A Subcommittee on Scope voted on the drugs of the last Pharmacopeia, as to whether they should be accepted for the next Pharmacopeia or whether they should be omitted. The chairman of this committee dissolved favorably to admission a large number (65) of tied votes. These lists of acceptances and deletions were then sent to the Executive Committee. The Executive Committee is the court of last appeal, and consists of the chairmen of the different subcommittees, fifteen in number. This committee has the power of approving or overruling any decision of the Subcommittee on Scope, and exercised this power liberally. It also did not hesitate to admit some preparations that had never even had the formality of a vote by the Subcommittee on Scope.

PERSONNEL OF COMMITTEES

Now, who are these members, elected from the convention by accredited delegates from the medical societies, medical colleges, pharmaceutical societies, pharmaceutical colleges and from several departments of the Government of the United States? For our purpose it is not now necessary to enumerate all the members of the Committee on Revision, but only those who constitute the Subcommittee on Scope, and those who constitute the Executive Committee, namely, the chairmen of the fifteen subcommittees.

The Subcommittee on Scope consists of:

Name	*Position Held*
S. Solis-Cohen, M.D., Chairman	Prof. Clin. Med., Medico-Chi. Coll.
Reid Hunt, M.D.	In Hygienic Laboratory, U. S. P. H. S.
Philip Marvel, M.D.	Practicing physician; Trustee A. M. A.
O. T. Osborne, M.D.	Prof. Therapeutics, Yale Univ.
H. H. Rusby, M.D.	Pharmacologist; Prof., N. Y. Coll. Pharm.
Torald Sollmann, M.D.	Prof. Pharmacology, Western Reserve Univ.
H. C. Wood, Jr., M.D.	Pharmacologist; Prof. Pharmacology and Thera., Medico-Chi. Coll.

The Executive Committee consists of:

S. Solis-Cohen, M.D.	Prof. Clin. Med., Medico-Chi. Coll.
Torald Sollmann, M.D.	Prof. Pharmacology Western Reserve Univ.
J. F. Anderson, M. D.	Hygienic Laboratory, U. S. P. H. S., Washington.
Henry Kraemer, Ph.D.	Prof. Botany, Phila. Col. of Pharmacy.
Charles H. LaWall, Ph.D.	Pharmacist and consulting chemist; Prof. Phila. Coll. of Pharmacy.
George D. Rosengarten, Ph.D.	Chemist of Powers-Weightman-Rosengarten Co., mfg. chemists
A. D. Stevens, Ph.D.	Pharmacist; Prof. Sc. Pharm., Univ. of Mich.

H. W. Wiley, M.D., Ph.D.....Chemist; Ex-Chief U. S. Bureau of Chemistry.
G. M. Beringer, Ph.M.....Pharmacist in retail business.
C. L. Diehl, Ph.M.....Pharmacist (retired); Emeritus Prof., Louisville Coll. of Pharmacy.
W. C. Alpers, Sc.D.....Pharmacist in retail business.
Otto Raubenheimer, Ph.G.....Pharmacist in retail business; Editor *Practical Druggist.*
Wilhelm Bodemann, Ph.G.....Pharmacist in retail business.
A. B. Lyons, A.B., M.D.....Pharm. Chem., with Nelson, Baker & Co., Mfg. Chem.
Chas. Caspari, Jr., Phar. D....Pharmacist; Prof., Univ. of Md.; Commissioner, Md. State Bd. Health.

Of this "court of last resort" there is one physician who practices at the bedside (Dr. Solis-Cohen), one who is a medical laboratory expert on the activities of drugs (Dr. Sollmann), one who is a drug laboratory expert at the Hygienic Laboratory (Dr. Anderson), and one who is a food and drug expert (Dr. Wiley); the other eleven are interested in some branch of pharmacy. These facts in conjunction with the way some, at least, of the pharmacal members look on recommendations of the medical men will show how much in evidence was the axiom that "physicians should decide what drugs should enter the Pharmacopeia."

At this date the new Pharmacopeia will contain at least 845 drugs and preparations. About half of these are not needed. One hundred and fifty-eight drugs and preparations were recommended for omission from the last Pharmacopeia by the Subcommittee on Scope. Just half of these, namely, seventy-nine, were voted in by the executive committee over the adverse recommendation of the Subcommittee on Scope, and it should be remembered that only one member of this executive committee is a physician practicing at the bedside, and he, in the Subcommittee on Scope, in sixty-five tie-votes, had decided in favor of admitting the drug under discussion. In other words, sixty-five more drugs and preparations would have been deleted by the Subcommittee on Scope had its chairman not voted in their favor, and he still had one more vote coming to him in the Executive Committee decisions.

USELESS DRUGS ACCEPTED FOR THE NEXT PHARMACOPEIA

It was "love's labor" absolutely "lost" to collect 117,000 prescriptions from all over this country in order to ascertain how many times a given drug or preparation was ordered. How many times a drug or preparation is ordered is no criterion as to its value. Beer is in enormous demand, but it has not yet been shown that it has any medicinal or food value. Is the nutrient value of a food determined by the frequency with which it is used? The turnip is a vegetable that is constantly bought and constantly eaten, but its food value is almost nil. The Pharmacopeia is supposed to be a book of standards for drugs, and each drug should have some valuable activity.

As previously stated, *if a physician desires to order a second-rate drug, he can always obtain it by the standard* (if there was one) *described in the last Pharmacopeia in which it was named.* If this were not a fact, and if it were not a recognized fact, deletions of drugs from previous Pharmacopeias would not have taken place. Such deletions (omissions) have occurred, and a large number of drugs which appeared in the last Pharmacopeia will not appear in the next, according to the approved deletion list of the Executive Committee.

If some drugs have been deleted on account of their lack of value, why may not all drugs which are without value be deleted? The argument of those members of the Revision Committee who desire a large Pharmacopeia is that a drug should be accepted and standardized, if some physicians desire that drug. The same argument would hold good for the very drugs that these men have deleted, and therefore this is an argument of no value for officializing drugs that are worthless.

It should constantly be borne in mind that the greater the number of drugs officialized, the greater the number of preparations that must be made, the greater amount of manufacturing that must be done by the pharmaceutical houses, and the greater the amount of buying that must be done by the retail druggist; in other words, the decision as to whether a useless drug shall enter the Pharmacopeia or not, is a commercial one. Will the medical men of the country stand for commercialism as determining whether or not a substance shall be officialized in the next Pharmacopeia, a supposed book of dependable values of useful drugs?

The following useless drugs and their preparations have been accepted at this date, April, 1913, for the Ninth Decennial Revision of the United States Pharmacopeia. It is, of course, supposable that many physicians will disagree with me in considering these drugs as of little value. Will anyone assert that any one of them is needed to cure a patient of an ailment, or to treat a condition, that may not be better treated by more active drugs?

Anthemis (Chamomile)
Arnica
  Tinctura Arnicae
Berberis (Oregon Grape Root)
  Fluidextractum Berberis
Calendula (Marigold)
  Tinctura Calendulae
Calumba (Calumbo)
  Fluidextractum Calumbae
  Tinctura Calumbae
Cannabis Indica (Indian Hemp)
  Extractum Cannabis Indicae
  Fluidextractum Cannabis Indicae
  Tinctura Cannabis Indicae
Chondrus (Irish Moss)
Cimicifuga (Black Snakeroot)
  Extractum Cimicifugae
  Fluidextractum Cimicifugae
  Tinctura Cimicifugae
Condurango
Convallaria (Lily of the Valley)
  Fluidextractum Convallariae
Crocus (Saffron)
Eriodictyon (Yerba Santa)
  Fluidextractum Eriodictyi
  Fluidextractum Eriodictyi Aromaticum
Frangula (Alder Buckthorn)
  Fluidextractum Frangulae
Gambir (Pale Catechu)
  Tinctura Gambir Composita
Gossypii Cortex (Cotton Root Bark)
  Fluidextractum Gossypii Corticis
Grindelia
  Fluidextractum Grindeliae
Guaiacum (Guaiac)
  Tinctura Guaiaci
  Tinctura Guaiaci Ammoniata
Haematoxylon
  Extractum Haematoxyli
Hydrastis (Goldenseal)
  Fluidextractum Hydrastis
  Glyceritum Hydrastis
  Tinctura Hydrastis
Kino
  Tinctura Kino
Krameria (Rhatany)
  Fluidextractum Krameriae
  Tinctura Krameriae
Lactucarium
  Syrupus Lactucarii
  Tinctura Lactucarii
Leptandra (Culver's Root)
  Extractum Leptandrae
  Fluidextractum Leptandrae
Lupulinum
  Fluidextractum Lupulini
  Oleoresina Lupulini
Matricaria (German Chamomile)
Mezereum
  Fluidextractum Mezerei
Moschus (Musk)
  Tinctura Moschi
Oleoresina Petroselini (Parsley) (Apiol)
Oleum Hedeomae (Oil of Pennyroyal)
Pareira
  Fluidextractum Pareirae
Phytolacca (Poke)
  Fluidextractum Phytolaccae
Pyrethrum (Pellitory)
  Tinctura Pyrethri
Quassia (Bitterwood)
  Tinctura Quassiae

Quillaja (Soapbark)
Tinctura Quillajae
Rhus Glabra (Sumach)
Fluidextractum Rhois Glabrae
Sabal (Saw Palmetto)
Fluidextractum Sabal
Sanguinaria (Bloodroot)
Tinctura Sanguinariae
Sarsaparilla
Fluidextractum Sarsaparillae
Fluidextractum Sarsaparillae Compositum
Senega (Senega Snakeroot)
Fluidextractum Senegae
Syrupus Senegae
Serpentaria (Virginia Snakeroot)
Fluidextractum Serpentariae
Tinctura Serpentariae
Staphisagria (Stavesacre)
Fluidextractum Staphisagriae
Stillingia (Queen's Root)
Fluidextractum Stillingiae
Sumbul
Extractum Sumbul
Fluidextractum Sumbul
Taraxacum (Dandelion)
Extractum Taraxaci
Fluidextractum Taraxaci
Triticum (Couch Grass)
Fluidextractum Tritici
Uva Ursi (Bearberry)
Fluidextractum Uvae Ursi
Xanthoxylum (Prickly Ash)
Fluidextractum Xanthoxyli
Zea (Corn Silk)
Fluidextractum Zeae

There is no good proof that hydrastis preparations have any special action on mucous membranes when used externally. There seems to be no good excuse for giving the disagreeable hydrastis preparations internally for action on the stomach.

Cannabis indica is a drug that varies greatly in strength, and its preparations rapidly deteriorate. Its action is therefore very uncertain, and therapeutically it is doubtful if cannabis indica is of any value, unless a too large dose of a strong preparation is given.

DRUGS AND PREPARATIONS THAT ARE DELETERIOUS

The following should not be officialized:

Veratrin and oleate of veratrin are dangerous.

Linimentum belladonnae is dangerous. The amount of absorption is uncertain.

Troches of potassium chlorate should not be officialized, as saliva mixed with potassium chlorate should not be swallowed. Potassium chlorate should never be given internally, in my opinion. It can cause severe irritation and even ulceration of the stomach, and kidney irritation and inflammation.

Dilute hydrocyanic acid should not be officialized, as it has no action whatever unless the dose is large, and then its action is dangerous.

RAPIDLY DETERIORATE

The following are a few of the preparations which rapidly deteriorate, and hence should not be officialized:

Acidum Hydriodicum Dilutum
Syrupus Acidi Hydriodici Dilutum
Acidum Hypophosphorosum
Acidum Nitrohydrochloricum Dilutum
Aqua Aurantii Florum
Aqua Aurantii Florum Fortior
Aqua Rosae
Aqua Rosae Fortior
Mucilago Acaciae
Mucilago Sassafras Medullae
Syrupus Aurantii
Syrupus Aurantii Florum

INFERIOR PREPARATIONS

If the selection of a drug or preparation were left to the layman who must take the medicine, it is presumptive that he would select the most active, other things being equal, of the drugs or preparations of the class that he needed. The same must be true of the physician writing the prescription. Hence why should we standardize and officialize preparations of a second-rate drug? The following drugs have been accepted for the new Pharmacopeia, though they are pharmacologically and therapeutically inferior to other drugs which act similarly. I realize, of course, that many physicians will find many points of difference in opinion in regard to the individual drugs and preparations, but as a class each reader will certainly decide against these drugs and preparations, if he is familiar with the pharmacology of these and better drugs. While many of these drugs have activities, they are inferior to other drugs and preparations of the same class.

Acetum Scillae (Vinegar of Squill)
Ammonii Bromidum
Ammonii Iodidum
Ammonii Salicylas
Bismuthi et Ammonii Citras
Calcii Bromidum
Cambogia (Gamboge)
Camphora Monobromata
Carbo Animalis Purificatus (Purified Animal Charcoal)
Ceratum Plumbi Subacetatis (Goulard's Cerate)
Cerii Oxalas (Cerium Oxalate)
Infusum Pruni Virginianae
Liquor Acidi Arsenosi
Liquor Arseni et Hydrargyri Iodidi
Liquor Hydrargyri Nitratis
Liquor Ferri Subsulphatis (Monsell's Solution)
Liquor Zinci Chloridi (Solution of Zinc Chlorid)
Magnesii Oxidum Ponderosum (Heavy Magnesium Oxid)
Cinchoninae Sulphas
Euonymus (Wahoo)
Extractum Euonymi
Extractum Quassiae
Fluidextractum Cinchonae
Fluidextractum Digitalis
Fluidextractum Gentianae
Fluidextractum Rosae
Glyceritum Amyli (Glycerite of Starch)
Glycyrrhizum Ammoniatum (Ammoniated Glycyrrhizin)
Guarana
Fluidextractum Guaranae
Oleatum Quininae (Oleate of Quinin)
Oleum Picis Liquidae (Oil of Tar)
Pilocarpinae Nitras
Quinina
Sodii Acetas
Sodii Chloras
Sodii Phosphas Exsiccatus
Styrax
Sulphonmethanum
Syrupus Rosae
Zinci Acetas

UNNECESSARY OFFICIALIZATION

The following drugs have been accepted for the Pharmacopeia in two forms, or several of the same group have been accepted, though their activities are so similar that reduplication seems unnecessary. Although not listed here, the preparations of many of the drugs are too many. Where several preparations of a drug are offered, one or more of them is superfluous. The careless redundancy of the Executive Committee is shown by the fact that it has officialized in its last approved list, March, 1913, *scopolamin hydrobromid* and *hyoscin hydrobromid*, though they are commercially, pharmacally and therapeutically identical. Following are a few unnecessary redundancies:

Belladonnae Folie (Belladonna Leaves)
Belladonnae Radix (Belladonna Root)
Colchici Cormus (Colchicum Root)
Colchici Semen (Colchicum Seed)
Cinnamomum Saigonicum
Cinnamomum Zeylanicum

Hyoscyamus
Fluidextractum Hyoscyami
Tinctura Hyoscyami
Stramonium
Tinctura Stramonii
Unguentum Stramonii

These drugs are so similar to belladonna that there seems to be no reason for officializing them and their preparations.

Hamamelidis Cortex (Witchhazel Bark)
Hamamelidis Folia (Witchhazel Leaves)
Hyoscinae Hydrobromidum
Scopolaminae Hydrobromidum
Liquor Potassii Arsenitis (Solution of Potassium Arsenite)
Liquor Sodii Arsenitis (Solution of Sodium Arsenite)
Viburnum Opuli (Cramp Bark)
Viburnum Prunifolium (Black Haw Viburnum)

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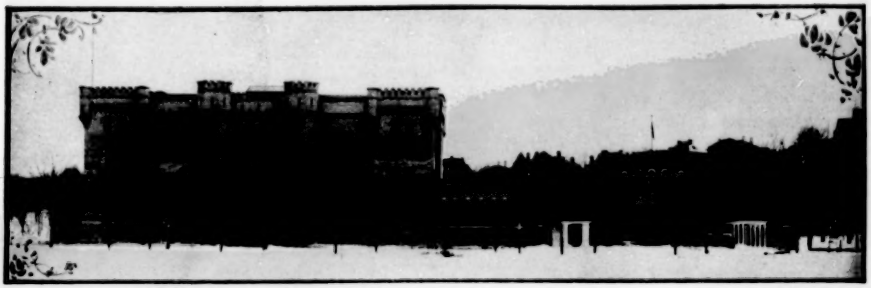

Fig. 1. National Guard Armory, where the President's Reception and the Ball will be held.

THE MINNEAPOLIS SESSION

AMERICAN MEDICAL ASSOCIATION, SIXTY-FOURTH ANNUAL SESSION, MINNEAPOLIS, JUNE 17-20, 1913

OFFICIAL CALL

TO THE OFFICERS AND MEMBERS OF THE CONSTITUENT ASSOCIATIONS OF THE AMERICAN MEDICAL ASSOCIATION

The sixty-fourth annual session of the American Medical Association will be held at Minneapolis.

The House of Delegates will convene at 10 a. m., Monday, June 16. In the House the representation of the various constituent associations for 1912 is as follows:

Alabama	3	Montana	1
Arizona	1	Nebraska	2
Arkansas	2	Nevada	1
California	3	New Hampshire	1
Canal Zone	1	New Jersey	3
Colorado	2	New Mexico	1
Connecticut	2	New York	11
Delaware	1	North Carolina	2
District of Columbia	1	North Dakota	1
Florida	1	Ohio	6
Georgia	3	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	9
Illinois	9	Rhode Island	1
Indiana	4	South Carolina	1
Iowa	3	South Dakota	1
Kansas	2	Tennessee	2
Kentucky	4	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	5	Washington	2
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	5		

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The general meeting, which constitutes the opening exercises of the scientific program of the Association, will be held at 10:30 a. m., Tuesday, June 17. The various sections will meet Tuesday at 2 p. m., and subsequently, according to their programs, on Wednesday and Thursday, June 18 and 19, and in some cases also on Friday morning, June 20.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 16, 17, 18 and 19, and from 9 to 10 a. m., on Friday, June 20.

ABRAHAM JACOBI, President.

ALEXANDER R. CRAIG, Secretary.

THE MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of state societies are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have been reported to THE JOURNAL in time to be included:

STATE DELEGATES

ALABAMA

W. H. Sanders, Montgomery.
Seale Harris, Mobile.
E. D. Bondurant, Mobile.

ARKANSAS

Morgan Smith, Little Rock.

CALIFORNIA

George H. Kress, Los Angeles.
George A. Hare, Fresno.
V. G. Veckl, San Francisco.

CANAL ZONE

W. C. Gorgas, Ancon.

COLORADO

Hubert Work, Pueblo.
W. A. Jayne, Denver.

CONNECTICUT

E. J. McKnight, Hartford.
D. Chester Brown, Danbury.

DELAWARE

Henry J. Stubbs, Wilmington.

DISTRICT OF COLUMBIA

G. Wythe Cook, Washington.

FLORIDA

Joseph Y. Porter, Key West.

GEORGIA

T. J. Charlton, Savannah.

IDAHO

J. N. Alley, Fort Lapwai.

ILLINOIS

A. L. Brittin, Athens.
A. C. Cotton, Chicago.
W. L. Noble, Chicago.
John A. Robison, Chicago.
J. T. Montgomery, Charleston.
E. W. Fiegenbaum, Edwardsville.

INDIANA

J. Rilus Eastman, Indianapolis.
Edwin Walker, Evansville.
F. R. Wynn, Indianapolis.
C. S. Bond, Richmond.

IOWA

L. W. Littig, Davenport.
N. M. Voldeng, Cherokee.

KANSAS

J. T. Axtell, Newton.

KENTUCKY

W. W. Richmond, Clinton.
J. W. Ellis, Masonville.
J. W. Kincaid, Catlettsburg.
A. T. McCormack, Bowling Green.

MAINE

E. H. Bennett, Lubec.

MARYLAND

G. Lane Taneyhill, Baltimore.
R. B. Warfield, Baltimore.

MASSACHUSETTS

H. D. Arnold, Boston.
H. G. Stetson, Greenfield.
H. W. Van Allen, Springfield.
Hugh Cabot, Boston.
C. P. Hooker, Springfield.

MICHIGAN
E. T. Abrams, Dollar Bay.
F. C. Warnshuis, Grand Rapids.
Louis J. Hirschman, Detroit.
C. E. Boys, Kalamazoo.

MINNESOTA
R. C. Dugan, Eyota.
Thomas McDavitt, St. Paul.

MISSISSIPPI
D. J. Williams, Gulfport.
S. W. Glass, Lyon.

MISSOURI
C. R. Woodson, St. Joseph.
A. W. McAlester, Jr., Kansas City.
H. L. Reid, Charleston.

MONTANA
Donald Campbell, Butte.

NEBRASKA
A. D. Nesbit, Tekamah.

NEVADA
Benjamin F. Cunningham, Reno.

NEW HAMPSHIRE
John Z. Shedd, North Conway.

NEW JERSEY
William S. Lalor, Trenton.

NEW MEXICO
S. D. Swope, Deming.

NEW YORK
William D. Johnson, Batavia.
Grant C. Madill, Ogdensburg.
Dwight H. Murray, Syracuse.
Wendell C. Phillips, New York City.
James P. Warbassee, Brooklyn.

NORTH CAROLINA
J. Howell Way, Waynesville.
H. A. Royster, Raleigh.

OHIO
C. L. Bonifield, Cincinnati.
W. J. Means, Columbus.
August Rhu, Marion.
H. C. Haning, Dayton.

OKLAHOMA
J. H. White, Muskogee.

OREGON
K. A. J. MacKenzie, Portland.

PENNSYLVANIA
George W. Guthrie, Wilkes-Barre.
Theodore B. Appel, Lancaster.
John B. Lowman, Johnstown.
M. Howard Fussell, Philadelphia.
Luther B. Kline, Catawissa.
Thomas D. Davis, Pittsburgh.
W. Rowland Davies, Scranton.
Wm. T. Hamilton, Philadelphia.
John B. McAlister, Harrisburg.

RHODE ISLAND
John Champlin, Westerly.

TENNESSEE
A. B. Cooke, Nashville.
S. M. Miller, Knoxville.

TEXAS
W. B. Russ, San Antonio.

UTAH
S. G. Kahn, Salt Lake City.

VERMONT
J. N. Jenne, Burlington.

VIRGINIA
William E. Anderson, Farmville.
John S. Davis, University.

WASHINGTON
J. E. Else, Pullman.
L. L. Love, Tacoma.

WEST VIRGINIA
P. A. Haley, Charleston.

WISCONSIN
J. J. McGovern, Milwaukee.
J. F. Pember, Janesville.
Rock Sleyster, Waupun.

WYOMING
M. A. Newell, Sheridan.

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
Joseph A. Capps, Chicago.

SURGERY
W. LeMoyne Wills, Los Angeles.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
Thomas S. Cullen, Baltimore.

OPHTHALMOLOGY
Thomas A. Woodruff, Chicago.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
Chevalier Jackson, Pittsburgh.

DISEASES OF CHILDREN
Charles Douglas, Detroit.

PHARMACOLOGY AND THERAPEUTICS
Torald Sollmann, Cleveland.

PATHOLOGY AND PHYSIOLOGY
Yandell Henderson, New Haven, Conn.

STOMATOLOGY
G. V. I. Brown, Milwaukee, Wis.

NERVOUS AND MENTAL DISEASES
E. B. Angell, Rochester, N. Y.

DERMATOLOGY
Frank C. Knowles, Philadelphia.

PREVENTIVE MEDICINE AND PUBLIC HEALTH
M. P. Ravenel, Madison, Wis.

HOSPITALS
Fred A. Washburn, Boston.

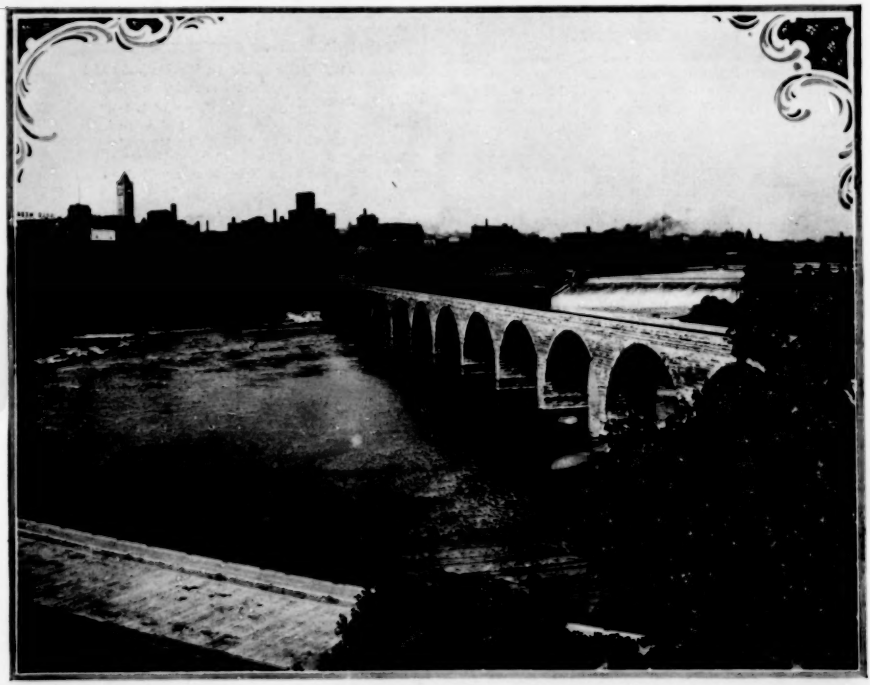

Fig. 2.—View of milling district, on the banks of the Mississippi River. Many of these views of Minneapolis and vicinity are from copyrighted photographs by Sweet of Minneapolis, to whose courtesy we are indebted.

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THE CITY OF MINNEAPOLIS

Meeting-Place of the Sixty-Fourth Annual Session of the American Medical Association

Minneapolis has not heretofore entertained the American Medical Association, but she has achieved a high reputation as a convention city, and her people await the opportunity to open wide her gates to a new visitor and to add another wreath to the laurels which, as a civic hostess, she has already won.

Minneapolis is well-fitted for the pleasurable task, and the presence of the university solves the problem of halls for the general sessions, for the scientific and commercial exhibits and for registration purposes, together with commodious gathering-places for the sections of the Association, located within a half-mile radius.

Fig. 3.—A group of Minneapolis hotels: the Plaza, above; the Radisson, left; the Andrews, center; and the Leamington, below. A list of hotels, addresses and rates is found on a later page of this issue.

The sister-city of St. Paul stands ready to assist in the accommodation and entertainment of the guests. Since the university campus lies close to the midway district and is almost equally accessible from each city, visitors will be conveniently housed in either place.

HISTORICAL INCIDENTS

If the city of Minneapolis is not old enough to cherish many traditions, her history is not without its touches of romance. Radisson and Grosilliers, *courriers des bois*, who crossed the site of the city between 1660 and 1665, did not realize that they were the vanguard of a great civilization. Father Louis Hennepin, who, twenty years later, discovered the great falls of the Mississippi and named them after his patron saint of Padva, did not imagine, as he blessed the waters of the Falls of St. Anthony, that their funded power was destined to turn the wheels of the greatest flour-mills in the world—mills which would grind the bread of continents.

Jonathan Carver who, a century later, in the year of the country's independence, found the same Indian tribes that had befriended Hennepin hunting the streams and forests of this plateau, did not foresee that his own name and that of his predecessor would identify the neighboring counties of a populous state, which would form the setting of a great city.

Lieut. Zebulon M. Pike, who, in 1805, bought from the Indians a military reservation, known then as Fort St. Anthony, and including the smaller acreage of the present Fort Snelling, did not know that he was buying up half the limits of the future metropolis of the Northwest. It was undoubtedly the fact of that purchase which drew to the spot the men who founded the city.

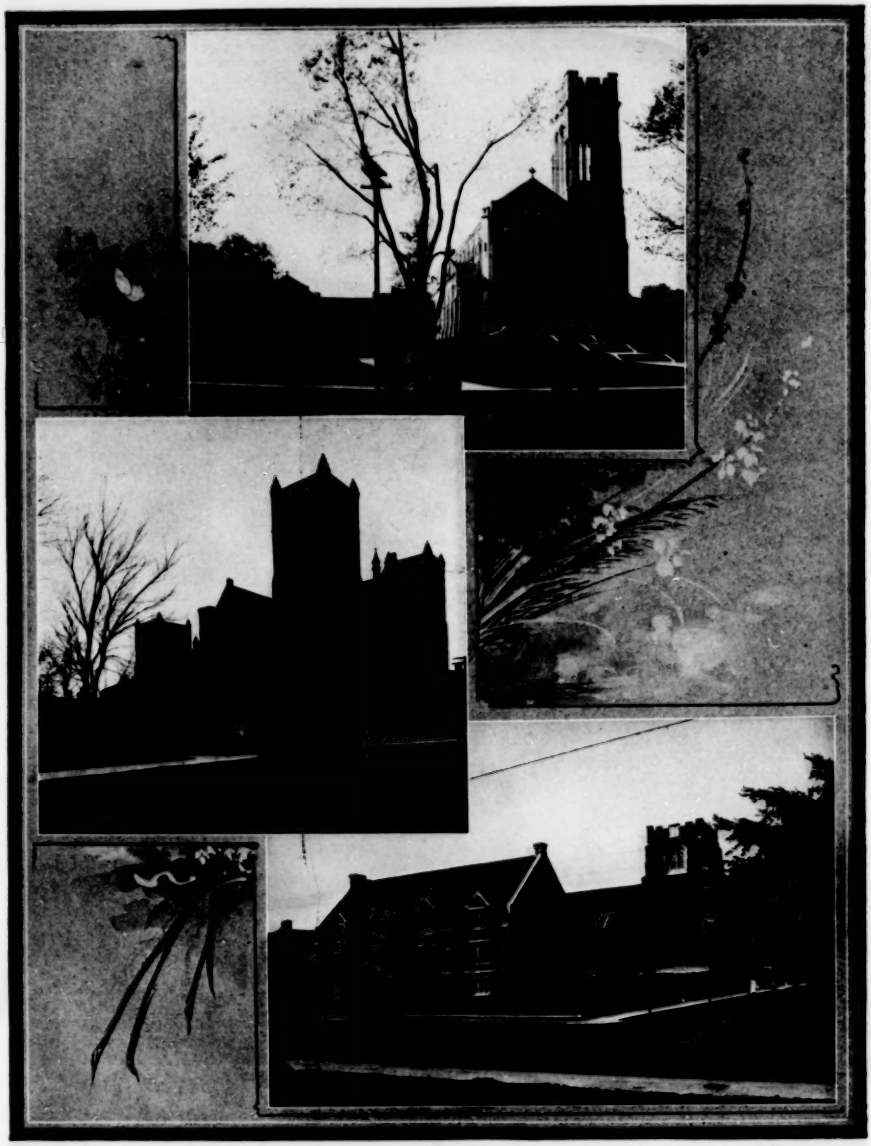

Fig. 4.—A group of Minneapolis churches: St. Mark's, above; Westminster, center; Plymouth Congregational, below.

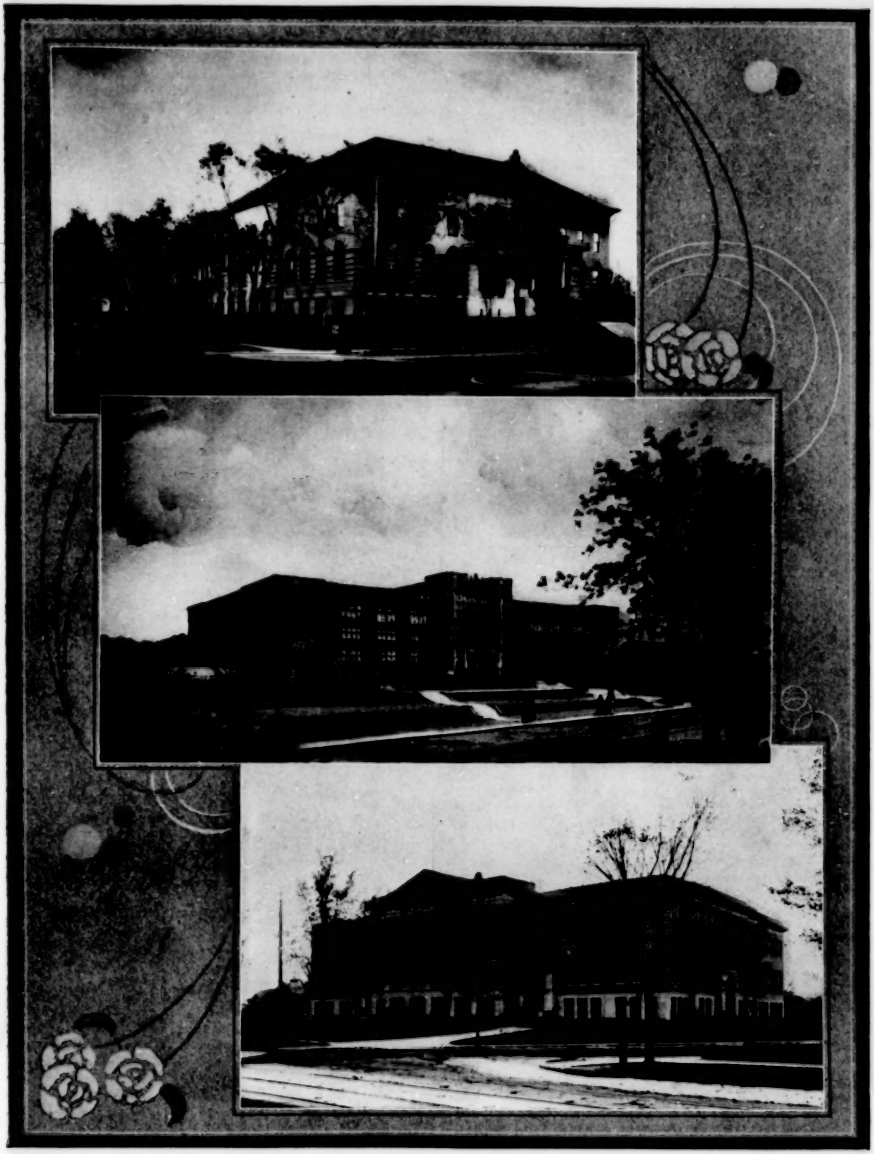

Fig. 5.—A group of Minneapolis schools: Augsburg Seminary, above; New Central High School, center; West High School, below.

On a great boulder, by the foot of a hill near Lake Harriet, is placed a bronze tablet which marks the neighboring point on which Samuel and Gideon Pond, missionaries to the Minnesota Indians, built the mission-house, in 1834, which served as the first dwelling-place of white men within the present boundaries of Minneapolis. It was in 1850 that Col. John H. Stevens, the first citizen of the town of those early days, built his home on the west bank of the river, where the first white child of the place was born.

In the year 1855 the village of St. Anthony, now the east side of Minneapolis, was incorporated; in 1856, the village on the west side followed suit; while in 1872, the two, grown to the stature of small cities, were united and the present corporation was formed.

POPULATION

The combined population of 20,000 of that day had gradually grown to 46,000 in 1882, when the western boom fever struck the city and rapidly doubled and trebled its former numbers. From that time on, until the present, the growth of Minneapolis has been of that normal progressive quality which marks the development of the permanently great city. The latest government estimate, based on the census of 1900, numbers 325,000 people.

THE BANKS

Commercial prosperity is commonly measured in banking terms. Twenty commercial banks, in addition to a larger number of private banking institutions, show combined annual deposits of $116,000,000, while the clearing-house exchanges represent the handling of $1,200,000,000 during the past year.

Fig. 6.—The Public Library, above; Minneapolis Art Museum, center; Pillsbury Public Library, below.

THE MILLING INDUSTRY

The mills of Minneapolis have made the name and the fame of the city travel far. Flour mills, individually the most extensive in area of any under single roof and, collectively, of largest efficiency of any in the world, are twenty-three in number and have an average daily capacity of 84,000 barrels of flour, or an actual output for the past year, of 17,000,000 barrels. These great industries are always open to the inspection of visitors and always attract the sightseer.

MANUFACTURERS

While the water-power of the Mississippi was initially the basis of the city's growth as a great manufacturing center, that power has been transformed, in later years, in large measure, into electrical energy and has been supplemented in this

task by the power of the St. Croix River, developed at Taylor's Falls, 41 miles distant, and carried to Minneapolis in the form of an electrical supply of 55,000 voltage. Thus water, steam and electricity combine to maintain the mills and manufactories of the city.

On the river, below the Tenth Avenue Bridge, is to be seen the power plant of the Twin City Rapid Transit Company, whence is delivered the energy that electrifies the entire street-car system.

The city's manufactures cover a large field of industrial enterprise, including flour, cereals, stock foods, machinery, furniture, lumber, agricultural implements, gas tractors, threshing machines, grain separators, wagons, auto-trucks, barrels, boilers, brick, bed-springs, wheelbarrows, linseed oil, paint, knit goods, cigars, shoes, clothing, bags, stationery, mattresses, hats, caps, gloves, etc., representing a total output valued at $200,000,000 a year.

THE MINNEAPOLIS JOBBERS

Minneapolis is a widely distributing center of trade. Her wholesalers cover a large area of the West and Northwest and she keeps an army of drummers in the field. The wholesale business of the city totals $350,000,000 a year.

RAILROAD TERMINALS

The city's functions as a trade-distributing center may be further measured by the radii which her railways put forth. The close relations of the Twin Cities necessitate the sharing of the terminal facilities of the carrying roads. Nine of these termina's are in Minneapolis, while twenty-six railway lines enter and leave the city. A new union station is in process of construction, and the city hopes to effect an arrangement by which all entering roads will use the same or immediately neighboring stations.

A bill has just passed the Minnesota legislature, providing for the creation of a commission to make and submit plans for this station to the State Railway and Warehouse Commission, and authorizing the appointment of a later commission to take charge of building the station and constructing the terminals.

THE HEAD OF NAVIGATION AND THE HIGH DAM

With the passage of acts of Congress providing for the erection of the Mississippi high dam, which is approaching completion, and for the making of a 6-foot river channel well up into the heart of the city, the vision of the immediate future brings significant possibilities into its foreground. Minneapolis will be, in truth, the head of navigation, with an excellent inland harbor, and she will share in the greater treasury of water-power which this project will make available to her and to the state university, which is building its new power plant on the banks of the river.

State legislative provision has been made for establishing municipal terminals of modern type and equipment, for the economical handling of freight; and business men of the city are purchasing stock in a navigation company which is preparing to engage in river traffic as soon as these terminals are ready for use. The larger shippers of the city are enthusiastic over the development of water transportation, and an informal census has brought, from a few of them, pledges of more than 500,000 tons of south-bound freight per annum, which they will forward by the river as soon as the means are provided.

Minneapolis intends to utilize the new method of river transportation consisting of a power vessel drawing trains of unit barges with a displacement of 1,000 tons each.

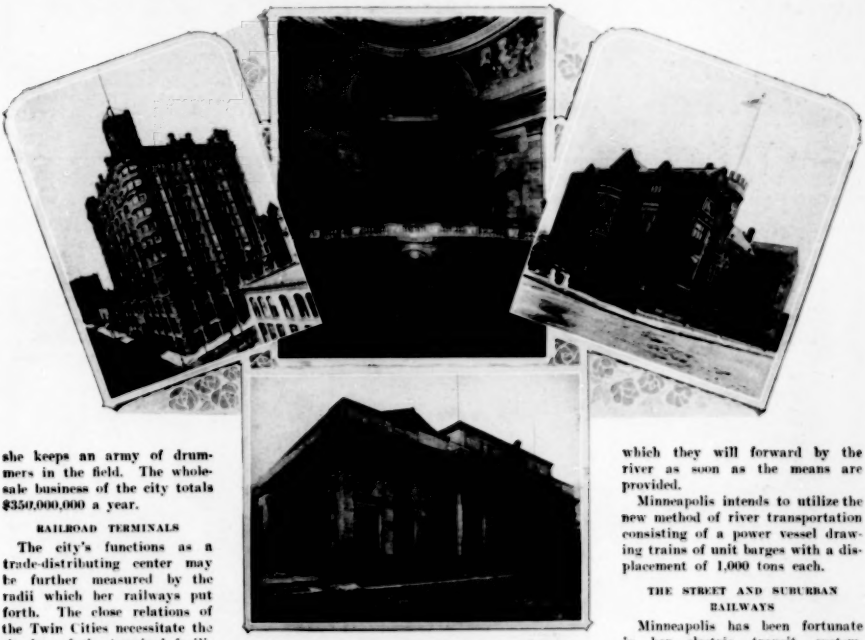

Fig. 7.—The rotunda of the Minnesota state capitol building at St. Paul, and some Minneapolis buildings: Metropolitan Life building, left; Minneapolis Club, right; First National Bank, below.

THE STREET AND SUBURBAN RAILWAYS

Minneapolis has been fortunate in her electric transit system. Under the guiding direction of the city council this system, which now covers 177.5 miles of trackage, is in process of extension for the still better relation of the remoter districts to the civic center. It is to be accounted the most potent single agency in the promotion of the great movement of the people of the city "back to the nearer soil." A veritable chain of suburbs is ringing the city around with country homes to which her great army of workers is finding ever readier access. Numerous cars carry the people to the neighboring lakes within the city limits. Four interurban lines link the Twin Cities and are serving to develop a populous midway district. Suburban trolley-roads extend to Stillwater, including White Bear Lake *en route*, to

the neighboring villages of Hopkins and St. Louis Park, and to Deephaven, Excelsior and Tonka Bay, on beautiful Lake Minnetonka, the city's choicest suburban asset.

A fleet of lake steamers connects with suburban trains, the boats making hourly trips to scheduled points on the lake. Under the favoring influence of this system of suburban travel, large numbers of homes for permanent and summer residences are springing up around this beautiful sheet of water and along the routes by which it is reached.

THE CITY'S ARCHITECTURE

Minneapolis is growing through that trying period in the evolution of a great city when the transitory passes into the permanent and when growing civic taste embodies itself in better and more comely architectural forms. Her great office buildings and warehouses, her university and school-buildings, her halls of art and music, and her homes of every type are responding to the impetus of a newly awakened sense of civic beauty. The extent and measure of her growth may be judged commercially by the sum of the building permits, amounting to over $14,000,000, issued in the past year. Notable structures recently completed or in process of building are the Radisson and the Dyckman hotels, the Hotel Leamington—a splendidly appointed family house—St. Mark's Church, Plymouth Church, the Pro-Cathedral, the Hennepin Avenue M. E. Church, the Art Museum, the new Central High School, the gymnasium

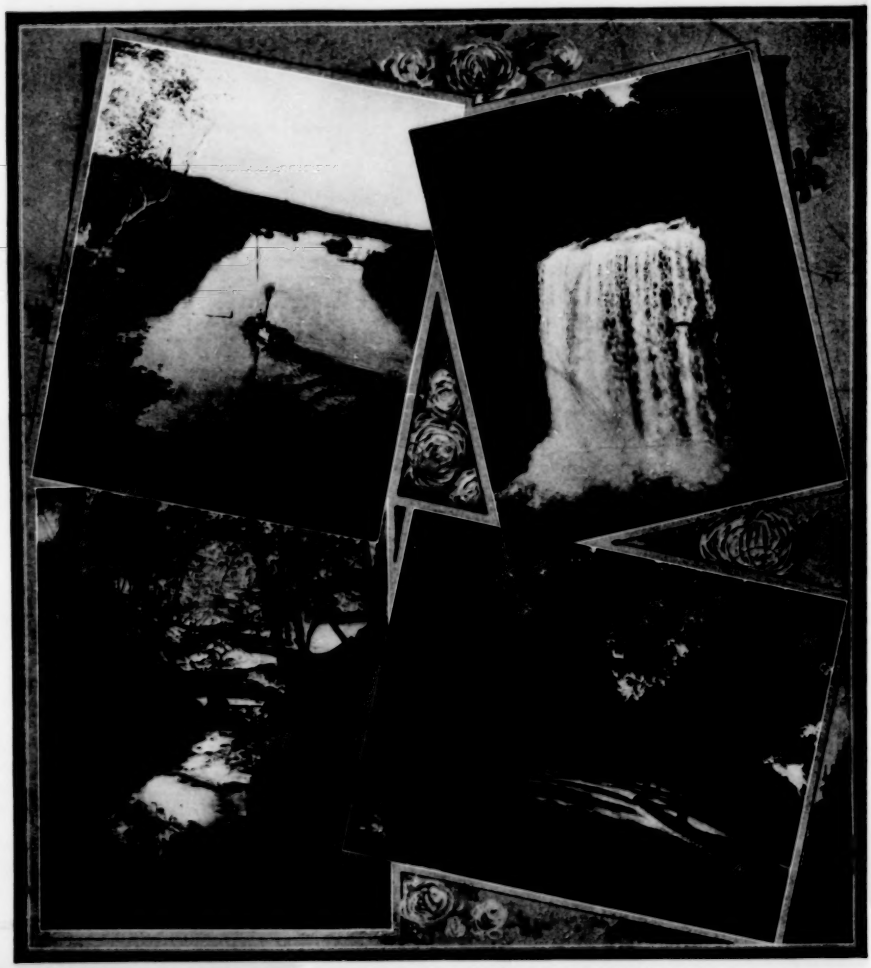

Fig. 8.—Park and water scenes about Minneapolis: view of the Mississippi River and Minnehaha Falls, above; below, a brook on the grounds of the Minnesota Auto Club and Minnehaha Boulevard Drive.

of the Minneapolis Club, the Elks' Club, the Shubert Theater, the new post-office and the new, so-called, Union Station. Minneapolis real estate prices are admittedly much lower than in any other city of her population, affording a fine opportunity for safe and profitable investment. There were 41,407 real estate transfers in 1912, totaling over $34,000,000 in value.

THE SCHOOLS

No better gage of the civic progress of a community can be set than that which marks its ideal of cultural values. A public-school system which occupies seventy grade schools and five high schools, employs 1,150 teachers and enrolls 47,127 pupils, with 5,000 additional students in night schools, measures up well to the sum of the city's population.

The best of school-buildings, put to the best and the largest uses; a modern curriculum, framed on the "six-three-and-three" year plan; securing the symmetrical development of the child, offering early differentiations in training, and efficiently preparing boys and girls for the life-work they elect to follow; the payment of higher salaries to better teachers are the aims or the achievements of the progressive men and women who have this school-system in their care.

Fig. 9.—Some Minneapolis hospitals: Combined City Hospital with Elliott Hospital, above; Northwestern Hospital, center; City Hospital, below.

An open-air school has recently been established, and others are to follow. The fresh air method within the schoolroom has been adopted in certain buildings; two schools for stammerers and one for subnormal children, in charge of specialists, are maintained. The ideal of the school as a social center is generally accepted by the people.

Health inspection is a permanent feature of the school management under the control of the Board of Education. A supervisor of school hygiene, a medical officer of expert training in his field, is employed, who has a corps of nine physicians and nineteen trained nurses in daily inspection service, and who acts as sanitary advisor to the board in all matters of construction or operation relating to health. The service aims not only at the early detection and control of contagious disease, but also at the discovery and removal of defects which prejudice health and bar school progress. It is maintained at a cost of $22,000.

School maintenance costs the city $1,980,000 a year, and in the past biennium $2,500,000 have been spent in new or enlarged buildings, to which $1,500,000 will be added for the ensuing two years.

The twenty-seven parochial and private schools of the city have an enrolment of 5,000 students.

THE CHURCHES

Minneapolis is a city of churches. A bird's-eye view shows it dotted with over two hundred spires, rising, many of them, from beautiful edifices with a total seating capacity which provides for half of the city's population. More and more, the churches tend to take on an institutional quality and to devote their property to social, as well as to purely religious uses.

LIBRARIES

That Minneapolis is, in unusual measure, a community of readers is attested by the growth of her public library system. A main library building, with eleven branches and 107 deposit stations, including schools, shops and factories, provides 256,000 volumes and has an annual circulation covering 1,320,000 issues of books. Reading-rooms, museum and art collections, attached to the library, entertain large numbers of the people. The Minneapolis Bar Association maintains a large law collection, and the Hennepin County Medical Society has an extensive library suitably housed on the eleventh floor of the Donaldson Building, on the corner of Nicollet Avenue and Seventh Street, an office-building devoted to doctors.

Further reference will be made to the university libraries.

MUSIC

Few places in Minneapolis are more popular than is the Auditorium, a fine music-hall, with a sufficient stage capacity for oratorios, operettas and the like. Nowhere has a higher order of entertainment been found.

The Auditorium has been the home of the larger musical organizations and, particularly, of the Minneapolis Symphony Orchestra. No influence on the public life of the city has been so potent as that of this remarkable orchestra, led by its remarkable conductor, Emil Oberhoffer, in cultivating the good taste of the community for the finer arts. The fame of this

orchestra is not local, however. It has won for itself a place in the hearts of music-lovers throughout the country.

ART MUSEUMS

The Minneapolis Fine Arts Society has served for many years as the leaven of art culture amid the mass of a busy people devoted largely to commercial pursuits. It has fostered exhibits, promoted lecture-courses and maintained studios for teaching purposes, through the faith in a growing appreciation of art for art's sake among the people. It is about to see of the travail of its social soul. A great art museum, the foundation for which was laid in a recent gift, by the late Clinton Morrison, of a block of land valued at $250,000, the realization of which was secured by a fund of $550,000 subscribed by 225 citizens, is arising on its admirably chosen site. The first section of the building which this fund will provide for will now be completed, but the finished plan calls for an ultimate total expenditure of $3,000,000. The museum, now in course of construction, is after the plans by McKim, Mead and White, of New York; it is 320 feet long and 82 feet deep and is in Vermont granite. It will house the Minneapolis Fine Arts Society and its art schools and will provide ample room for permanent and movable exhibits.

Fig. 10.—The State and County Hospital at St. Paul.

Not least among the educational factors in the attainment of this result, has been the Walker Art Gallery, maintained for many years at the home of T. B. Walker, and freely thrown open to the public. There are few art collections in the country that will vie with this private museum. The city's guests are especially invited to its enjoyment.

The Handicraft Guild is an industrial and art enterprise which is exercising a fine educational influence in the community. It maintains a school of applied arts; it puts its art products within reach of the people; it serves as a social center and as a gathering place for women's clubs and small parties.

SOCIAL FORCES

Minneapolis is well provided with clubs and club-houses, which minister to the social, recreational, athletic, commercial, educational and economic welfare of their members and of the public. The Minneapolis Club, the University Club, the Commercial Club, the Athletic Club, the Elks' Club and the Odin Club touch the life of the men of the community at various points. The Woman's Club, here as elsewhere, is a comprehensive body alike in membership and in manifold interests, and is more or less directly associated with other and more specialized societies of women. It has been a potent influence for public good in the affairs of the city. The Thursday Musicale is a large organization which has developed the love and the patronage of music in the community in notable measure.

Social-settlement workers find in so large a city as Minneapolis an ample field of service. Pillsbury House at the south end, Unity Settlement House at the north end and Wells Memorial House near the city's center serve the purposes of neighborhood clubs, and afford educational and recreational activities for large groups of people. They maintain kindergartens, day nurseries, classes in domestic training, reading-rooms and lecture-courses.

The Associated Charities is in the twenty-sixth year of a very useful life. It employs twenty-seven agents in relief work, maintains active employment bureaus and does much to systematize and direct social justice to the unfortunate. Contributions to its support aggregate $45,000.

The visiting nurses' department of the charities is finely organized and is doing effective sanitary and remedial service. It sustains a corps of twelve nurses in constant employ.

Not the least of the agencies of social betterment is the patrol limits law which, for a quarter of a century, has kept the retail liquor traffic within restricted bounds in the downtown area, protects the school-building from the near neighborhood of the saloon, and puts within reach of police centers the places where liquor is legally sold.

SANITARY RESOURCES

By grace of a marvelous climate, Minneapolis boasts a death-rate of 10.44 per thousand—lower than that of any similarly large city in the world. A broad area for the housing of her people, the dry and invigorative atmosphere they breathe, a generous measure of sunshine, an annual precipitation of but 29.35 inches, an average winter temperature of 17 F. and an average summer mark of 70.5, an easy opportunity of reaching country air and recreation, and a play-ground system which is freely used are the major factors in the sum of these sanitary statistics.

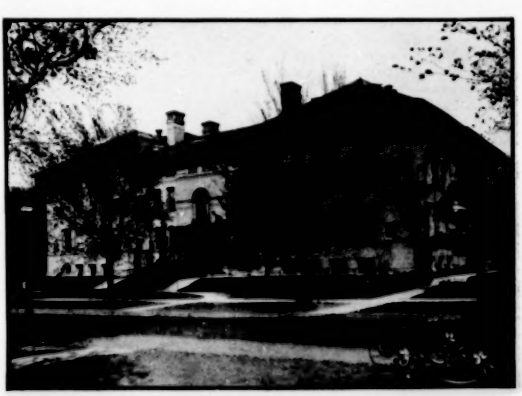

Fig. 11.—The Medical Building of the University of Minnesota.

THE PUBLIC WATER-SUPPLY

Minneapolis has been recently emancipated from the alternatives of danger from a polluted water-supply or of thraldom to the spring-water companies. After years of agitation, a Citizens' Pure Water Commission was appointed about three years ago, and on the strength of its reports, experts were

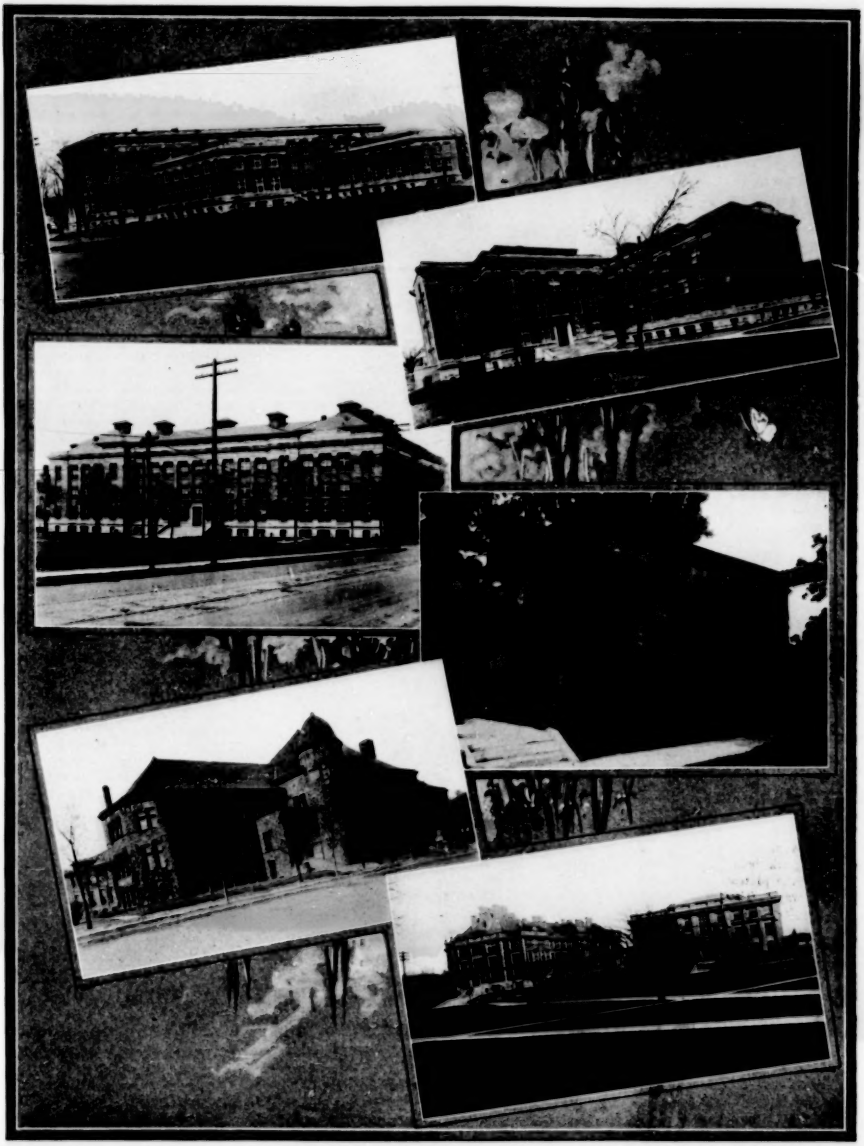

Fig. 12.—A group of buildings of the University of Minnesota: Mechanical Engineering building, above; New Millard Hall, left, center; Pillsbury Hall, left, below; Anatomy building, right above; Law School, left, center; Folwell Hall and Laboratory of Physics, below. All the section meetings are to be held on the campus of the University of Minnesota.

employed to plan for the city a rapid filtration and purification system. The plant has just reached completion, at a cost of less than a million dollars, and is a model one in every particular. In every serviceable feature it compares favorably with the best systems of other cities. Its clear-water basin has a capacity of 45,000,000 gallons, and is the largest enclosed pure water reservoir in the country. The operating cost is 84 per million gallons of water.

Fig. 13.—Fort Snelling, one of the historic spots of the Northwest.

THE PARK SYSTEM

Minneapolis is a "city of lakes and gardens." There are twenty lakes within the city limits and 120 within a radius of 25 miles. Over 3,700 acres, or one ninth of the entire area of the city, is in the park system. The city has 35 miles of parkways under the supervision of the park commissioners. One stretch of park land on the western side of the city covers nearly a thousand acres and includes seven large lakes. Four of these lakes are being connected by lagoons which will afford a continuous water-way with 12 miles of shore line, no part of which is more than 4 miles from the down-town district.

The movement to establish a civic center is well under way and the park board has almost completed its work of surrounding the plateau basin in which the city rests with parks and parkways. The historic Falls of Minnehaha are the center of a beautiful park which is connected with Lake Harriet by a broad parkway running along the banks of Minnehaha Creek. From these falls, at the extreme southwestern corner of the city, the banks of the Mississippi are parked, also, for 4 miles, up to the beautiful campus of the state university.

The park commissioners of the Twin Cities work in close harmony. Their municipal park systems meet at the Mississippi River, and on both sides of the Father of Waters unsurpassed park drives extend from the heart of Minneapolis to the historic military post, Fort Snelling. This is the only part of this great river where both banks are dedicated to the perpetual enjoyment of all the citizens.

Visitors note the absence of such signs as *Verboten* or "Keep off" in the Minneapolis parks. The children learn an interest in the city at large through the special playgrounds, wading-pools and public baths in many of the parks. Private launches and sailboats are seen on the several lakes, and rowboats and canoes are to be had at rental. The commissioners maintain free skating-rinks in many of the parks during the winter. The public baths at Lake Calhoun are objects of beauty and popular sources of health and recreation. The entire city may be said to be one great park, since for thirty years past the park board has supervised the planting of shade-trees everywhere. These hardy elms are placed at even distances and are pruned and cared for by this board.

LAKE MINNETONKA

Few cities enjoy so rare an endowment as Minneapolis cherishes in her suburban "big water," a lake of marvelous and varied beauty, with 130 miles of wonderfully sinuous shoreline, a succession of bays and beautiful islands, its banks adorned with wooded heights and rolling lawns and innumerable gardens. Minnetonka is reached by trolley-line and traversed by a fleet of scheduled steamboats. On the one side the Minneapolis and St. Louis Railway and on the other, the Great Northern Railway touch at several lake-points.

A MEDICAL CENTER

In matters medical, the Twin Cities have served as a common center, and between them, the honors have been well divided. So long have the clinical facilities of St. Paul and Minneapolis been pooled in the interests of medical education that substantial harmony of effort has been maintained between them. As in the commercial, so in the professional field, a large area of country is tributary to them and an unusually strong hospital system has been developed.

By virtue of a combination between city and county government, and through a quarter of a century of able and devoted management on the part of its superintendent, Dr. Arthur B. Ancker, the City and County Hospital of St. Paul has taken front rank, with a capacity of 600 beds, among the hospitals of the country. Following it by several years in the history of its development, the City Hospital of Minneapolis compares favorably with it at its present stage of evolution. Including a pavilion for contagious diseases, it provides for 360 patients. Hopewell Hospital, with 120 beds, a city sanatorium for tuberculous patients, is situated at the northern limits of the city. Its progressive superintendent, Dr. H. O. Collins, will welcome visitors to the hospital.

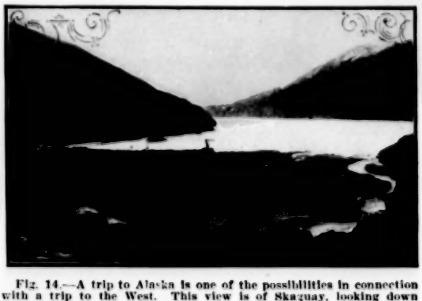

Fig. 14.—A trip to Alaska is one of the possibilities in connection with a trip to the West. This view is of Skaguay, looking down Lynn Canal, the great northern arm of Alexander Archipelago. It was explored and so named by Vancouver in 1794. It is walled in by high snow-peaked mountains that rise sheer out of the sea and is considered the most wonderful fiord in Alaska.

St. Barnabas' Hospital, the Northwestern Hospital, Asbury Methodist Hospital, St. Mary's Hospital, the Swedish Hospital,

the Lutheran Deaconesses' Hospital, Thomas Hospital, Hill Crest Hospital, in Minneapolis; and St. Luke's Hospital, St. Joseph's Hospital, Luther Hospital, Bethesda Hospital, St. John's German Lutheran Hospital and the Norwegian Hospitals in St. Paul are the principal private institutions in the Twin Cities, and, these, for the most part, are under denominational control.

THE UNIVERSITY OF MINNESOTA

The University of Minnesota is to be the especial hostess of the American Medical Association. With its beautiful campus, having an area of eighty-five acres, and its group of thirty-three buildings and its numerous assembly-halls and lecture rooms, it offers a unique opportunity for the entertainment of so large a body of visitors meeting in so many sections for the transaction of general and scientific business. It is sufficiently remote from the busier quarters of the city to afford the desirable quietude for the Association's meetings, while it will give ample opportunity for arrangements which will enable members to remain within easy reach of any of the sections during each entire day.

On behalf of the University of Minnesota as a whole, President George E. Vincent presents to the members of the American Medical Association the following cordial and hospitable greeting:

A GREETING FROM THE UNIVERSITY

By President George E. Vincent

The University of Minnesota welcomes the members of the American Medical Association to an institution to which alone is entrusted the duty of medical education for this state. This unique responsibility imposes peculiar obligations as to staff, equipment and standards.

Our visitors will be warmly greeted by a corps of medical teachers and scientific investigators who have devoted themselves unsparingly to building up a center of instruction and research in the earlier years under conditions which might well have discouraged less earnest and enthusiastic men. To this group it will now be possible to add a number of other investigators and teachers of distinction.

The American Medical Association will hold many of its sessions in the new and modernly equipped buildings of the medical school. So far as material things can afford assurance of efficiency, the university feels unaffected pride in these laboratories which express the ideas and ideals of the staff.

The Elliott Memorial Hospital, under the complete control of the medical school administratively, medically and for teaching and investigation, represents an essential factor in modern medical education, a clinical hospital in close connection with laboratories, all under unified management. Visitors

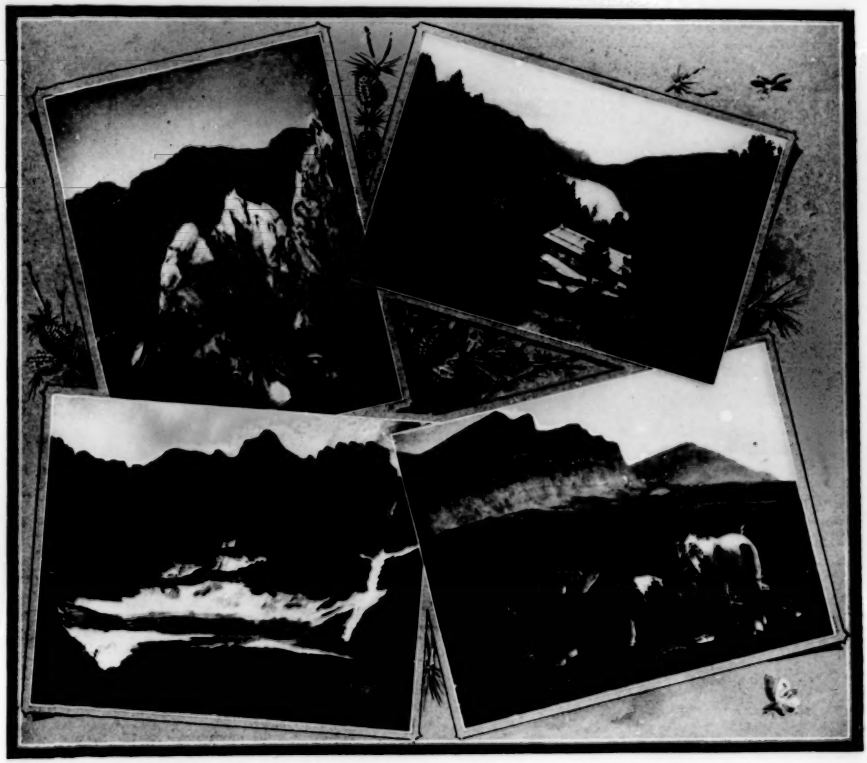

Fig. 15.—Views in Glacier National Park, to which there will be an excursion: a section of Blackfoot Glacier, left, above; Iceberg Lake, below; a part of St. Mary Camp on St. Mary Lake, right, above; Chief Three Bears and his squaw, packing up, below.

will have leisure, it is hoped, to visit the admirably administered hospitals of Minneapolis and St. Paul, which generously offer valuable clinical facilities to the medical school of the university.

The spirit and purpose of an institution are the key to its character. A university supported by the state can justify itself only by socializing its work, and testing this by the measure of public service.

The medical school of this university seeks to realize this ideal by insisting that the physician is primarily a public servant and not a private practitioner, that medical research is a fundamental social obligation, that popular education in medical knowledge is an essential type of university extension, that the training of public sanitarians is an institutional duty, that the exalting of ideals of personal character and of standards of professional conduct is at once the high privilege and noble ambition of a true center of medical investigation and teaching.

MAINTENANCE

The university as a whole was maintained during the past year at a cost of $1,254,859. The legislature has been asked to provide for an increased maintenance of $316,000.

GOVERNMENT

The university is governed by a board of regents, having eleven members, with the president of the university a member *ex officio*. By act of the board of regents, each school or college is autonomous, its faculty directing its domestic affairs, determining its particular educational policy and controlling its student body. A university senate has been created, of which all professors and associate professors of all faculties are members, to which is entrusted the consideration and conduct of the interests of the university as a whole.

REGISTRATION

The total registration of the past university year was 6,960. Included in this summary are collegiate students, 4,057; sub-collegiate students (mainly in the agricultural schools), 2,530, and extension students, 313. At the last commencement 618 degrees were conferred.

Fig. 16.—Lake McDermott and Mt. Wilbur in Glacier National Park.

THE UNIVERSITY

The educational service that the University of Minnesota renders to the state is to be gaged (1) by the range of the educational opportunity it offers, and (2) by the agencies it employs for bringing this opportunity within the reach of the people of the state. Some indication of the measure of the university by these two standards is given below.

The university comprises: the College of Science, Literature and the Arts; the College of Engineering and Mechanic Arts; the Department of Agriculture, including the College of Agriculture and of Forestry; the Schools of Agriculture established at three points in the state; the School of Traction Engineering; the Summer School, and the main experiment station, with five substations; the Law School; the Medical School, with which is associated the School for Nurses; the College of Dentistry; the College of Pharmacy; the School of Mines and its Experiment Station; the School of Chemistry; the College of Education; the Graduate School and the University Extension Division.

BUILDINGS

On the older campus of 60.9 acres are found twenty-five college buildings, occupied by the administration offices, the main library, the colleges of science, literature and the arts, education, dentistry and pharmacy, the schools of law, chemistry and mines, the graduate school, the extension division and, in part, by the college of engineering and the medical school.

On the newer campus, of 47.6 acres recently acquired, relatively unfinished and still largely occupied by dwelling-houses, have been completed, recently, the Main Engineering Building, the Experimental Engineering Laboratory, the Elliott Memorial Hospital and the two new medical buildings, known as Millard Hall and the Institute of Anatomy.

In near neighborhood, the new laboratory of the School of Chemistry is in process of construction at a cost of $405,000.

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The Department of Agriculture occupies its own extensive campus of 409 acres at a distance of 3 miles from the general university, but to be connected with it shortly by an extended rapid-transit trolley line. There is to be found a group of twenty-seven buildings devoted to this department alone.

The legislature of 1913 has appropriated funds for remodeling the School of Mines Building, recently burned, for the College of Education; for remodeling the old School of Chemistry Building for the social uses of the men of the university; for a new Home Economics Building and a gymnasium and drill-hall on the Agricultural Campus; for a biologic laboratory; a service building for the university hospitals; a gymnasium for women on the main campus, and for sundry small buildings, alterations and new equipment. These appropriations for new buildings and equipment will total $1,089,750.

of the state are being organized and are meeting a warm welcome.

THE GRADUATE SCHOOL

The work of the Graduate School is a growing one. It extends itself to all departments of the schools or colleges prepared to undertake such instruction. Graduate students to the number of 159 were registered last year.

For the better development of this field, especially in the professional schools, a plan for the adoption of the four-quarter system, with summer sessions, is now under discussion by the university senate.

A fund for research work has been created and is administered by a special committee of the faculty. Research fellowships have been provided also, and are to be sought after in larger numbers.

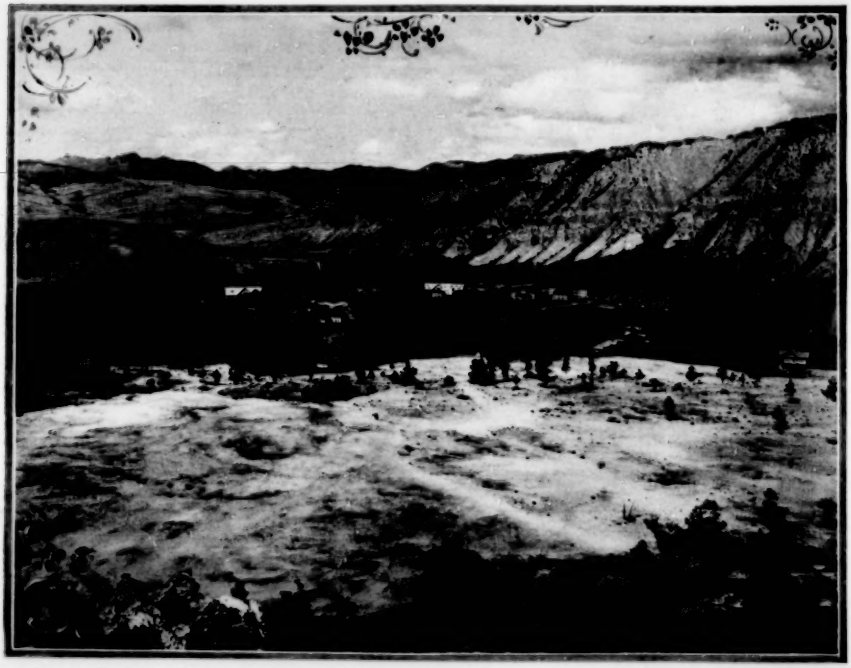

Fig. 17.—Mammoth Hot Springs, in Yellowstone National Park, to which there will be excursions at the close of the meeting.

THE FACULTIES

A university is great in measure, not of its material establishment alone, but of the adequate numbers and the capacity in teaching and research of its faculty staff. It is the policy of the administration to add new men of efficient training or recognized power as rapidly as the need for their appointment is shown and as the provisions of the budget permit.

UNIVERSITY EXTENSION

To bring the educational forces of the university within nearer reach of the people of the state, the board of regents has created a university extension board, consisting of the president, the director of the extension division and representatives of each participating school or college. Lecture courses, correspondence courses and university weeks of travel to points

SOCIAL SERVICE

A good beginning has been made in the direction of university social centers. The gift of Shevlin Hall as a gathering-place for university women has done much for the social life and the self-government of the "co-eds." With the attainment of a men's building, also, a great advance will have begun.

The dormitory system has been initiated in the erection of Sanford Hall, a beautiful university home for women, under the general control of the dean of women.

University students' councils, both for men and for women, are organized and are extending their influence into the social as well as the educational life and discipline of the institution.

HEALTH INTERESTS

No very definite system of health regulation in the university has yet been achieved. Directors of physical culture

for men and for women are in control of all matters relating to the physical development and well-being of the students. Military drill and gymnasium courses are compulsory for the under classes of men; but the latter are optional only for women, until better accommodations for them can be secured. Physical examinations of students in each year are conducted and records preserved. A trained nurse is employed to watch over the health of the women resident in Sanford Hall and in neighboring boarding-places.

Fig. 18.—Views in Yellowstone Park: Tourists leaving the railroad station at Gardiner for the Yellowstone Park trip, above; Grand Canyon Hotel, center; bears at Yellowstone Lake, below.

The establishment of a model sanitary district, in charge of a health officer, and of an infirmary for students not resident in their own homes, are among the mooted problems of the near future.

MEDICAL EDUCATION IN MINNESOTA

Minnesota has been the first among the states to realize the ideal of medical education unified in a single university school under the full ownership and control of the state. First and last, eight private schools have existed in Minnesota, but each has died a natural death or has been merged — the last of them five years ago — into the university. That the state should control medical education in the interests of the people is more greatly to be desired than the police regulation of medical practice. A single strong school, amply housed and equipped, with a well-salaried and able administrative and teaching force, not as an affiliated body, but as an integral part of the state university and supported by a progressive state board of medical examiners, is the fortunate solution of the problem of medical education in Minnesota.

THE MEDICAL SCHOOL

This was established in 1888 and has just passed its quarter centennial. It occupies the Institute of Public Health and Pathology, the new Institute of Anatomy, the new Millard Hall, the Elliott Memorial Hospital, with a number of small dwelling houses for nurses, help and laundry (which are soon to be in part replaced by a modern service building), and a clinical building occupied by the outpatient department or dispensary.

Only second in importance to the unification of medical teaching in the state has been the acquirement by gifts and by appropriations of the university hospital system as an intrinsic part of the school, and with it directly owned and controlled by the university. It provides, at present, 136 beds, which number will be increased to 166 by transfer of domestic features to the new service building. A substantial beginning has thus been made toward a clinical equipment which the faculty expects will be enlarged to four or five hundred beds within a few years. For the immediate present, the fuller complement of clinical material is secured by the affiliation with the university of the medical staffs of the City Hospital of Minneapolis and the City and County Hospital of St. Paul.

REORGANIZATION

A reorganization of the medical school has been effected which becomes operative at the opening of the ensuing university year. A somewhat redundant teaching staff, the accrued product of a constructive period marked by the merging of the private schools, by the wide distribution of clinical services in the scattered hospitals of the Twin Cities and by the non-payment of clinical salaries, necessitating fragmentary contributions of teaching time, has been reduced from 184 to 120. The diminution is mainly in the clinical branches, to which the principle of regular compensation must now be applied. Of the charter members of the college, only four still remain in service.

The government of the school has been revised. The direct business and educational control is placed with an administrative board, consisting of the president, the dean, the secretary, the heads of departments and of one faculty member at large. This board is put into close touch with the faculty, which will

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include all professors and instructors, and will possess a power of review over the acts of the board. The departments of instruction have been reorganized also and recast. They will, hereafter, include departments of anatomy, of physiology, of pharmacology, of pathology, of public health and bacteriology, of medicine, of surgery and of obstetrics. The teaching of gynecology is absorbed into the two departments last named. The subject of chemistry is referred to the School of Chemistry. The department of public health is a new creation, combined with bacteriology, which is separated from pathology.

SCHOLARSHIP

Candidates for admission to medical courses must have had two years of high-school Latin and must win the degree of B.A. or B.S. to become eligible for the degree in medicine. Three years, for the one, and two years of study for the other, must be taken in the College of Science, Literature and the Arts, of this or some other recognized university, and must include, as required courses, one year in rhetoric, physics and biology, two years in chemistry and a reading knowledge of German or French. For the B.A., one year in the medical school, and for the B.S. two years complete the candidacy, provided a satisfactory standing in the four years of work has been attained. To the four years of medical study hitherto required has been added a fifth year, which may be spent either in an approved hospital internship or in advanced laboratory work. A main medical library is provided which, together with department libraries, catalogues 24,000 volumes.

THE SCHOOL FOR NURSES

The foundation of the university hospitals gave the opportunity for the creation of a university school for nurses under the jurisdiction of the medical faculty. It is the first training school for nursing women which has the same requirements for admission as academic colleges, and leads to a university degree. The school is attracting an educated and efficient body of women.

AFFILIATED COLLEGES

The students of the College of Dentistry and of Pharmacy receive instruction required in anatomy, physiology, pharmacology and bacteriology in the Medical School. Members of the faculties of these colleges, in turn, contribute to the teaching of medical students in oral hygiene, oral surgery and pharmacy.

PROGRAM OF OPENING MEETING

Minneapolis Auditorium, Nicollet Avenue and Eleventh Street,

Tuesday, June 17, 10:30

Music.

Call to Order. President, ABRAHAM JACOBI, New York.

Invocation. REV. JAMES E. FREEMAN, D.D., Minneapolis.

Addresses of Welcome:

GEORGE EDGAR VINCENT, PH.D., LL.D., President of the University of Minnesota.

H. H. KIMBALL, President of the Hennepin County Medical Society.

HON. WALLACE G. NYE, Mayor of the City of Minneapolis.

HON. ADOLPH OLSON EBERHART, Governor of Minnesota.

Report of the Committee on Arrangements. FRANK C. TODD, Chairman.

Introduction and Installation of President-Elect JOHN A. WITHERSPOON, Nashville, Tenn.

Address. JOHN A. WITHERSPOON, President.

Music.

NOTE.—Many members will arrive in Minneapolis Tuesday morning, just in time for the opening meeting, which will be held down town. Unless they have time to go out to the university grounds and register and get back down town by 10:30, they should stay down town for the opening meeting. All the section proceedings are to be held in the various buildings on the grounds of the University of Minnesota.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program nor is the list complete. The Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, also lists of committees, programs of the General Meeting and of the meetings of the House of Delegates, lists of entertainments, map of Minneapolis, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

SECTION ON PRACTICE OF MEDICINE

CHAIRMAN, W. JARVIS BARLOW, LOS ANGELES; SECRETARY, ROGER S. MORRIS, CLIFTON SPRINGS, N. Y.

Tuesday, June 17—2 p. m.

Chronic Arthritis. LEONARD W. ELY, Denver.

Remote Effects of Lesions of the Prostate and Deep Urethra. THOMAS McCRAE, Philadelphia.

Studies on Uric Acid in the Blood and Urine, with Special Reference to the Influence of Atophan. JAMES S. McLESTER, Birmingham, Ala.

Importance of Latent Conditions in the Production of Neurasthenic States. CHARLES P. EMERSON, Indianapolis.

Value of the Tuberculin Reaction in Early Diagnosis of Tuberculosis. V. C. VAUGHAN, JR., Detroit.

Artificial Pneumothorax for Relief of Advanced Pulmonary Tuberculosis. CHARLES L. MINOR, Asheville, N. C.

Blood-Pressure Studies in Tuberculosis at High Altitudes. LEROY S. PETERS and E. S. BULLOCK, Silver City, N. Mex.

Rest and Repair in Pulmonary Tuberculosis. JOHN W. FLINN, Prescott, Ariz.

Wednesday, June 18—9 a. m.

A Comparison Between Jacquet's Sphygmograph and Crehore's Micrograph in Cardiac Tracings. ALEXANDER LAMBERT, New York.

Clinical Aspects of Hypertension. JOSEPH L. MILLER, Chicago.

Clinical Significance of High and Low Auscultatory Pulse-Pressures. WILLARD J. STONE, Toledo, Ohio.

Perpetual Arhythmia. HUGO A. FREUND, Detroit.

Relation of the Toxic Symptoms to the Pathologic Types of Goiter. H. S. PLUMMER, Rochester, Minn.

Diseases of Porto Rico. ELMER F. OTIS, Ponelas, Porto Rico.

Study of a Case of Congenital Hemolytic Jaundice. ERNEST T. F. RICHARDS, St. Paul, Minn.

Wednesday, June 18—2 p. m.

SYMPOSIUM ON SERUMS AND VACCINES

Federal Control Over the Manufacture of Serums and Vaccines JOHN F. ANDERSON, Washington, D. C.

Treatment of Pneumonia by Specific Serums. RUFUS J. COLE, New York.

Antistreptococcus Serum. GEORGE H. WEAVER, Chicago.

The Treatment of Lobar Pneumonia with Partially Autolyzed Pneumococci and Pneumococcus Extracts. E. C. ROSENOW, Chicago.

Typhoid Vaccination in the Army in 1912. FREDERICK F. RUSSELL, Washington, D. C.

Thursday, June 19—9 a. m.

Gastroscopy, with Demonstration.
HENRY H. JANEWAY, New York.

The Water-Trap Stomach: Symptomatology, Diagnosis and Treatment.
G. REESE SATTERLEE and L. T. LEWALD, New York.

Points of Value to Be Derived from Roentgenoscopy of the Gastro-Intestinal Tract. R. WALTER MILLS, St. Louis.

The Permanent Place in Medicine of Roentgenography after a Bismuth Meal. RUSSELL H. BOGGS, Pittsburgh.

Cause and Treatment of Diarrhea.
RICHARD C. CABOT, Boston, and HAVEN EMERSON, New York.

Carbohydrate Tolerance in Diagnosis.
JOSEPH C. FRIEDMAN and SOLOMON STROUSE, Chicago.

Some Phases of Experimental Nephritis.
W. B. MACNIDER, Chapel Hill, N. C.

Cerebrospinal Fluid in the Diagnosis and Treatment of Syphilis. WALTER V. BREM, Los Angeles.

Tuesday, June 19—2 p. m.

SYMPOSIUM ON LEPROSY

Dermatologic Aspects of Leprosy.
ISADORE DYER, New Orleans.

Clinical Aspects of Leprosy. E. BOECKMANN, St. Paul, Minn.

Bacteriology and Specific Therapy of Leprosy.
C. DUVAL, New Orleans.

Public Health Aspects of Leprosy in the United States.
RUPERT BLUE, Washington, D. C.

SECTION ON SURGERY

CHAIRMAN, A. F. JONAS, OMAHA; SECRETARY, DEAN D. LEWIS, CHICAGO

Tuesday, June 17—2 p. m.

Chairman's Address: The Surgeon and the Research Laboratory. A. F. JONAS, Omaha.

Posterior Gastro-Enterostomy in Acute Perforated Ulcer of the Duodenum. Report of Thirty Cases.
JOHN B. DEAVER, Philadelphia.

Postoperative Ileus. ANGUS MCLEAN, Detroit.

Congenital Dislocation of the Knees, with Report of Two Cases. JOHN W. PERKINS, Kansas City, Mo.

Proctoclysis: An Experimental and Clinical Study.
HUGH H. TROUT, Roanoke, Va.

Etiology and Significance of Membranes About the Cecum and Colon. DAVID CHEEVER, Boston.

Anaphylaxis in the Diagnosis of Cancer.
J. LOUIS RANSOHOFF, Cincinnati.

Wednesday, June 18—9 a. m.

The External Bone Clamp Versus the Internal Bone Plate in Fractures of Long Bones. LEONARD FREEMAN, Denver

The Mechanism of the Production of Fractures.
EMMETT RIXFORD, San Francisco.

Surgical Management of Injuries to the Elbow-Joint. Primary and Secondary. JOHN B. MURPHY, Chicago.

Surgery of the Thyroid: Observations on Five Thousand Operations. CHARLES H. MAYO, Rochester, Minn.

Extrathoracic and Intrathoracic Esophagoplasty.
WILLY MEYER, New York.

Wednesday, June 18—2 p. m.

Oration on Surgery: Who Shall Do Surgery?
W. D. HAGGARD, Nashville, Tenn.

SYMPOSIUM ON INFECTIONS

Chronic Focal Infection as a Causative Factor in Chronic Arthritis. FRANK BILLINGS, Chicago.

Surgical Lesions of the Kidney Associated with Disease of the Female Pelvic Organs.
JOHN G. CLARK, Philadelphia.

Infections of the Prostate and Seminal Vesicles, their Rôle in Toxemia. HUGH H. YOUNG, Baltimore.

Chronic Suppurative Bone Diseases and Their Treatment: Demonstration of Plastic Models. CARL BECK, Chicago.

Injection of Boiling Water for Hyperthyroidism.
MILES F. PORTER, Fort Wayne, Ind.

Thursday, June 19—9 a. m.

Nephritis as a Surgical Problem, and Its Treatment as a Preliminary to Operation. J. F. PERCY, Galesburg, Ill.

Technic of Roentgenoscopy of the Gastro-Intestinal Tract, and Interpretation of Screen and Plate Findings.
R. D. CARMAN, Rochester, Minn.

The Added Responsibility of the Surgeon when Called on to Treat Surgical Lesions in Their Earliest Stages.
J. C. BLOODGOOD, Baltimore.

Fatal Peritoneal Folds and Their Relation to Postnatal Acute and Chronic Occlusions of the Large and Small Intestine. J. RILUS EASTMAN, Indianapolis.

Symptoms and Diagnosis of Membranous Pericolitis.
JABEZ N. JACKSON, Kansas City, Mo.

Radiographic Changes in Pituitary Disease.
ALFRED LUGER, Boston.

The Necessity of Preserving the Periosteum in Bone Transplantations. CLARENCE A. MCWILLIAMS, New York

Roentgenoscopy of the Liver and Biliary Passages.
JAMES T. CASE, Battle Creek, Mich.

Thursday, June 18—2 p. m.

Original Uses of the Bone-Graft in Surgery.
FRED H. ALBEE, New York.

SYMPOSIUM ON ANESTHESIA

Administration of Alkaloids Before Anesthesia.
ISABELLA C. HERR, Chicago.

Nitrous Oxid and Oxygen Anesthesia.
HARRY G. SLOAN, Cleveland.

Intratracheal Insufflation Anesthesia (Meltzer-Auer).
CHARLES H. PECK, New York.

Local Anesthesia. J. F. MITCHELL, Washington, D. C.

Ether Percentages. W. M. BOOTHBY, Boston.

Surgical Aspects of Intestinal Stasis, from an Anatomic Point of View. JOHN E. SUMMERS, Omaha.

Friday, June 20—9 a. m.

Gastric Tetany. W. L. RODMAN, Philadelphia.

An Experimental Study of the Mobilization of Ankylosed Joints.
NATHANIEL ALLISON, St. Louis, and BARNEY BROOKS, Baltimore.

Therapeutic Possibilities of Transfusion.
BERTRAND M. BERNHEIM, Baltimore.

Theory and Practice of Transfusion.
J. J. HOGAN, San Francisco.

Thyroglossal Cyst and Fistula: Report of Three Cases.
HERMANN B. GESSNER, New Orleans.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

CHAIRMAN, F. F. SIMPSON, PITTSBURGH; SECRETARY, BROOKE M. ANSPACH, PHILADELPHIA

Tuesday, June 17—2 p. m.

Chairman's Address: Right-Sided Hypertension with Occasional Cardiac Dilatation as Postoperative Complications. F. F. SIMPSON, Pittsburgh.

Newer Methods of Reducing the Mortality of Pelvic Operations. GEORGE W. CRILE, Cleveland.

Postoperative Renal Infection. HENRY DAWSON FURNISS, New York.

Final Results Following Operations for Ectopic Pregnancy. RICHARD R. SMITH, Grand Rapids.

The Movable Kidney. J. H. CARSTENS, Detroit.

Further Points on the Sterility of Women. EDWARD REYNOLDS, Boston.

Wednesday, June 18—9 a. m.

Prolapse of the Uterus: Its Surgical Treatment. FRANKLIN H. MARTIN, Chicago.

Vagino-Uterine Prolapse and Its Effective Treatment. E. E. MONTGOMERY, Philadelphia.

The Anatomy and Surgical Utility of the Sacro-Uterine Ligaments. GEORGE B. SOMERS, San Francisco.

A Study of the End-Results of the Webster-Baldy Operation. JOHN OSBORN POLAK, Brooklyn.

Tuberculous Salpingitis. PHILEMON E. TRUESDALE, Fall River, Mass.

Infections in the Pelvis from a General Surgeon's Point of View. JOHN B. MURPHY, Chicago.

Wednesday, June 18—2 p. m.

Cancer of the Stomach. WILLIAM J. MAYO, Rochester, Minn.

Cancer of the Uterus: Some Points to Be Emphasized in the Early Diagnosis. RUFUS B. HALL, Cincinnati.

Carcinoma of the Cervix Uteri. A. MACKENRODT, Berlin.

Theoretical and Practical Foundations of a Radical Operation for Carcinoma of the Cervix. EMIL RIES, Chicago.

Radium in Gynecology. HOWARD A. KELLY, Baltimore.

Heat in the Treatment of Inoperable Cancer of the Vagina and Uterus: Method and Results. J. F. PERCY, Galesburg, Ill.

Thursday, June 19—9 a. m.

Care of the Umbilical Stump: A Bacteriologic Study. FRED L. ADAIR, Minneapolis.

A Cinematographic Presentation of the Care of Nursing Infants. E. GUSTAV ZINKE, Cincinnati.

Destructive and Constructive Changes in the Uterus Causing Hemorrhage. JOHN G. CLARK, Philadelphia.

Biochemical Factors in the Causation of Uterine Hemorrhage. J. RIDDLE GOFFE, New York.

Treatment of Hemorrhage from the Non-Pregnant Uterus. JOHN B. DEAVER, Philadelphia.

Intra-Abdominal Adhesions. R. C. COFFEY, Portland, Ore.

Thursday, June 19—2 p. m.

Report of Committee on the Question: Should the Puerperal Uterus Be Emptied of Ovular Remains in Presence of Infection, and if so, When? JOSEPH B. DELEE, Chicago.

Emptying the Uterus as One of the Methods of Treating Ante-Partum Eclampsia. REUBEN PETERSON, Ann Arbor, Mich.

What Is the Proper Place for Abdominal Cesarean Section in the Treatment of Placenta Praevia? HENRY D. FRY, Washington, D. C.

The Serodiagnosis of Pregnancy and Its Place in Practical Obstetrics. HENRY SCHWARZ, St. Louis.

The Essentials of Sanatorium Treatment of Tuberculous Gravidae and Puerperae and Their Children. CHARLES S. BACON, Chicago.

The Value of Abdominal Measurements in Pregnancy: A Statistical Study. ALFRED BAKER SPALDING, San Francisco.

Friday, June 20—9 a. m.

Experimental Transplantation of Intestine After Resection of the Sigmoid, with Special Reference to Resection for Malignant Diseases of the Pelvis. J. SHELTON HORSLEY, Richmond, Va.

Local and Spinal Anesthesia in Gynecology and Obstetrics. GEORGE GELLHORN, St. Louis.

Spinal Anesthesia in Gynecology, Obstetrics and Abdominal Surgery. W. WAYNE BABCOCK, Philadelphia.

The Thyroid Gland and Its Degeneration in Relation to Obstetrics and Gynecology. CHANNING W. BARRETT, Chicago.

Membranous Dysmenorrhea. K. I. SANES, Pittsburgh.

SECTION ON OPHTHALMOLOGY

CHAIRMAN, HIRAM WOODS, BALTIMORE; SECRETARY, GEORGE S. DERBY, BOSTON

Tuesday, June 17—2 p. m.

Chairman's Address. HIRAM WOODS, Baltimore.

Physiologic Optics the Basis for Teaching Clinical Ophthalmology. WALTER B. LANCASTER, Boston.

Some Modern View-Points with Regard to Glaucoma. ROBERT SATTLER, Cincinnati.

Experimental Study of Intra-Ocular Pressure and Ocular Drainage. MARK J. SCHOENBERG, New York.

Hydrophthalmos. With a Histologic Report of Two Cases, One of Which Presented a Congenital Coloboma. WILLIAM ZENTMAYER, Philadelphia.

Wednesday, June 18—9 a. m.

Equivalent Values in Spectacle Lenses. WILLIAM E. SHAHAN, St. Louis.

Trachoma, Its Prevalence and Control Among Immigrants. JOHN MCMULLEN, Washington, D. C.

Trachoma Among the Indians. J. W. SCHERESCHEWSKY, Washington, D. C.

Trachoma Among the Mountaineers of Eastern Kentucky. Illustrated by Lantern Slides. J. A. STUCKY, Lexington, Ky

Wednesday, June 18—2 p. m.

Metastatic Ophthalmia. Report of Three Cases, One of Which Resulted in Recovery of Vision. WILLIAM H. WILDER, Chicago.

The Diagnostic and Therapeutic Uses of Tuberculin in Ocular Diseases, with a Review of Some of the Claims Made for It. A. EDWARD DAVIS, New York.

Phlyctenular Ophthalmia and Episcleritis. A Study of the Bearing of the Newer Research on Their Etiology as the Basis of a Scientific Therapy. WILL WALTER, Chicago.

The Temperature of the Conjunctiva. LUCIEN HOWE, Buffalo, N. Y.

The Topical Diagnostic Value of the Hemopic Pupillary Reaction and the Wilbrand Hemianoptic Prism Phenomenon with a New Method of Performing the Latter. CLIFFORD B. WALKER, Boston.

Preventable Blindness: A Challenge to the Professions. HENRY COPLEY GREENE, Boston.

Thursday, June 19—9 a. m.

Ocular Vertigo. ALLEN GREENWOOD, Boston.

Is the Percentage of Myopic Eyes Diminishing? SAMUEL D. RISLEY, Philadelphia.

The Asthenopia of Muscular Imbalance. HOWARD F. HANSELL, Philadelphia.

Apparent Esophoria and Its Relation to Convergence Insufficiency. H. B. LEMERE, Omaha.

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Some Comparative Measurements of the Skull and Sella Turcica, with the Report of Eight Cases.
JOHN B. POTTS, Omaha.

Thursday, June 19—2 p. m.

Blepharochalasis. Report of Two Cases with the Microscopic Examination. WALTER BAER WEIDLER, New York.

Artificial Illumination a Factor in Ocular Discomfort.
NELSON M. BLACK AND F. A. VAUGHN, Milwaukee, Wis.

Postcataract Extraction Delirium. Report of Eleven Cases.
WALTER R. PARKER, Detroit.

The Surgical Treatment of a Certain Type of Penetrating Wounds of the Sclera by Means of a Double Conjunctival Flap. LEE MASTEN FRANCIS, Buffalo, N. Y.

Primary Lues of the Bulbar Conjunctiva.
CHARLES NELSON SPRATT, Minneapolis.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

CHAIRMAN, ROBERT LEVY, DENVER; SECRETARY, BURT R. SHURLY, DETROIT

Tuesday, June 17—2 p. m.

Chairman's Address: The Dignity of Otolaryngology.
ROBERT LEVY, Denver.

Conservative Surgery of the Nasal Septum with Description of a "Limited" Submucous Operation.
I. W. VOORHEES, New York.

Etiology, Diagnosis, Prognosis and Treatment of Sphenopalatine Ganglion Neuralgia. G. SLUDER, St. Louis.

Untoward Results of the External Operation on the Frontal Sinus. R. H. SKILLERN, Philadelphia.

Wednesday, June 18—9 a. m.

SYMPOSIUM ON THE LARYNX

Chronic Laryngitis. EMIL MAYER, New York.

Diagnosis and Treatment of Paralysis of the Larynx.
E. FLETCHER INGALS, Chicago.

Diagnosis and Treatment of Syphilitic Laryngitis.
J. C. BECK, Chicago.

Diagnosis and Treatment of Laryngeal Tuberculosis.
F. L. DENNIS, Colorado Springs, Colo.

Differential Diagnosis and Treatment of Malignant Diseases of the Larynx. CHEVALIER JACKSON, Pittsburgh.

Clinical Principles of the Functional Disturbances of the Voice (with special consideration of the singing voice).
T. S. FLATAU, Berlin.

Wednesday, June 18—2 p. m.

Vaccine Therapy. T. B. COOLEY, Detroit.

SYMPOSIUM ON THE RELATION OF INTERNAL MEDICINE TO DISEASES OF THE NOSE, THROAT AND EAR

Internal Medicine. B. W. SIPPY, Chicago.

Neurology. C. D. CAMP, Ann Arbor, Mich.

Ophthalmology. W. R. PARKER, Detroit.

Thursday, June 19—9 a. m.

Some Pathologic Changes in the So-called Otosclerosis with Suggestions as to Treatment.
PHILIP HAMMOND, Boston.

Chronic Obstructive Middle-Ear Deafness.
G. E. SHAMBAUGH, Chicago.

Temporosphenoidal Abscess with General Meningeal Symptoms. Drainage Through the Cisterna Magna. Mastoid Operation. Recovery. F. P. EMERSON, Boston.

Statistical Report of Hearing Following the Radical Mastoid Operation. Tampon vs. Skin-graft.
C. F. WELTY, San Francisco, Cal.

Methods of Measuring Auditory Acuity.
WALTER A. WELLS, Washington, D. C.

Thursday, June 19—2 p. m.

Prostheses for the Improvement of Hearing.
W. SOHIER BRYANT, New York.

Tuberculosis of the Middle Ear; with Special Reference to Its Labyrinthine Complications.
HILL HASTINGS, Los Angeles.

Technic of Tonsillectomy.
GEORGE L. RICHARDS, Fall River, Mass.

Tonsillectomy by the Sluder Method.
A. M. CORWIN, Chicago.

Results of Tonsillectomy Under Local Anesthesia.
B. D. SHEEDY, New York.

SECTION ON DISEASES OF CHILDREN

CHAIRMAN, HENRY D. CHAPIN, NEW YORK; SECRETARY, FRANK C. NEFF, KANSAS CITY, MO.

Tuesday, June 17—2 p. m.

Chairman's Address: Radiographic Studies of the Intestines of Infants. HENRY DWIGHT CHAPIN, New York.

The Roentgen Ray in the Diagnosis of Obscure Abdominal Conditions in Infancy and Childhood.
JOHN LOVETT MORSE, Boston.

The Roentgen Ray in Pylorie Obstruction.
L. R. DEBUYS, New Orleans.

Duodenal Ulcer in Infancy. BORDEN VEEDER, St. Louis.

Rupture of Mediastinal Lymph-Node into Bronchus.
A. L. GOODMAN, New York.

Nephrolithiasis in Infancy.
ARTHUR N. COLLINS, Duluth, Minn.

Wednesday, June 18—9 a. m.

The Treatment of Rheumatic Endocarditis from an Out-Patient Department. WILLIAM PALMER LUCAS, Boston.

Functional Heart Murmurs, Cardiac Arhythmias and Slow Heart-Rate in Children.
SAMUEL MCCLINTOCK HAMILL, Philadelphia.

Clinical Report and Post-Mortem Findings in a Case of a Child with a Congenital Heart Disease Dying from Acute Nephritis. H. M. MCCLANAHAN, Omaha.

Acute Acid Intoxication in Children.
THOMAS C. MCCLEAVE, Berkeley, Cal.

The Protein Poison and Its Relation to Disease.
VICTOR C. VAUGHAN, Ann Arbor, Mich.

The Nature of Hecocolitis from an Etiologic Standpoint.
CLIFFORD G. GRULEE, Chicago.

Nutritional Injuries, Produced by Starch.
I. A. ABT, Chicago.

Wednesday, June 18—2 p. m.

Status Thymolymphaticus: Four Cases in One Family.
WALTER L. BIERRING and J. A. GOODRICH, Des Moines.

Transfusion in the Therapeutics of Infancy.
THOMAS B. COOLEY, Detroit.

Treatment of Inguinal Hernia in Children.
ARTHUR E. HERTZLER, Kansas City, Mo.

General Anesthesia in the Surgery of Childhood.
WILLIAM CAVAN WOOLSEY, Brooklyn.

Spasmophilia with Especial Reference to Familial Reactions and "Repeated Absences."
JULIUS PARKER SEDGWICK, Minneapolis.

Desirability of Early Diagnosis of Mental Deficiency.
A. C. ROGERS, Faribault, Minn.

Thursday, June 19—9 a. m.

Vulvovaginitis in Children. RICHARD M. SMITH, Boston.

Roseola Infantum. JOHN ZAHORSKY, St. Louis.

Report of Case of Staphylococcus Meningitis in Child.
FRANK SPOONER CHURCHILL, Chicago.

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Atypical Forms of Meningitis (Posterior Basic Meningitis; Aseptic Meningitis). A. SOPHIAN, Kansas City, Mo.

Leukocyte Counts in Epidemic Meningitis and Pneumonia. JULIUS H. HESS, Chicago.

Precocious Menstruation. G. P. GENGENBACH, Denver.

Thursday, June 19—2 p. m.

The Hospital Management of Contagious Diseases. D. L. RICHARDSON, Providence, R. I.

Federal Children's Bureau; the Law, the Organization, the Scope of Its Present Work. JULIA C. LATHROP, Washington, D. C.

The Etiology of Artificial Feeding; a Plea for the Study of Breast-Milk Problems. H. LOWENBURG, Philadelphia.

Some Economic and Sociologic Problems Related to Nutrition and Growth of Infants. B. RAYMOND HOOBLER, New York.

Diseases and Defects of Older Children as Revealed by School Medical Inspection—A Broadening of the Field of Pediatrics. WALTER S. CORNELL, Philadelphia.

A Consideration of Tardy Syphilis. H. H. YERRINGTON AND FLORENCE HOLSCLAW, San Francisco.

Friday, June 20—9 a. m.

JOINT SESSION OF THE SECTION ON DISEASES OF CHILDREN WITH THE AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS

Certified Milk. T. C. McCLEAVE, Berkeley, Cal.

The Efficiency of the Medical Milk Commission, Graphically Illustrated. HENRY L. COIT, Newark, N. J.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

CHAIRMAN, RAY L. WILBUR, SAN FRANCISCO; SECRETARY, M. I. WILBERT, WASHINGTON, D. C.

Tuesday, June 17—2 p. m.

Chairman's Address: The Teaching of Therapeutics. RAY L. WILBUR, San Francisco.

Address of the Delegation from the American Pharmaceutical Association.

Yesterday, To-day and To-morrow: The Activities of the Council on Pharmacy and Chemistry. TORALD SOLLMANN, Cleveland.

The Quality of Drugs Sold to Dispensing Physicians. W. A. PUCKNER, Chicago.

Carelessness in the Pharmacy as a Reason for a Restricted Materia Medica. M. I. WILBERT, Washington, D. C.

Biochemical Research. JOHN A. HANDY, Minneapolis.

The Physiologic Testing of Ergot. A. C. CRAWFORD, Palo Alto, Cal.

Wednesday, June 18—9 a. m.

Treatment of Anginal Pains. CHARLES LYMAN GREENE, Minneapolis.

Internal Hemorrhages: Can We Control Them? FRANK BILLINGS, Chicago.

Diuretics in Cardiac Diseases: General Review. A. D. HIRSCHFELDER, Baltimore.

The Value of Diuretic Drugs in Acute Experimental Nephritis. HENRY A. CHRISTIAN, Boston.

Therapy of Chronic Renal Disease. C. F. HOOVER, Cleveland.

Therapeutic Pneumothorax as a Palliative Measure: A Report of Twenty Cases from the Cincinnati Tuberculosis Hospital. KENNON DUNHAM and CHARLES S. ROCKHILL, Cincinnati.

Wednesday, June 18—2 p. m.

SYMPOSIUM ON SERUMS AND VACCINES

Federal Control over the Manufacture of Serums and Vaccines. JOHN F. ANDERSON, Washington, D. C.

Treatment of Pneumonia by Specific Serums. RUFUS I. COLE, New York.

Antistreptococcus Serum. GEORGE H. WEAVER, Chicago.

The Treatment of Lobar Pneumonia with Partially Autolyzed Pneumococci and Pneumococcus Extracts. E. C. ROSENOW, Chicago.

Typhoid Vaccination in the Army in 1912. FREDERICK F. RUSSELL, Washington, D. C.

Thursday, June 19—9 a. m.

Diet in Hepatic Cirrhosis. N. S. DAVIS, Chicago.

Venous Blood-Pressure as Influenced by the Drugs Employed in Cardiovascular Therapy. JOSEPH A. CAPPS AND S. A. MATTHEWS, Chicago.

The Elimination of the Digitalis Bodies. ROBERT A. HATCHER, New York.

Clinical Observations on the Emetic Action of Digitalis. CARY EGGLESTON, New York.

The Solubility of White Leads in Human Gastric Juice and Its Bearing on the Hygiene of the Lead Industries. A. J. CARLSON, Chicago.

The Bromid Question Experimentally Considered. CHARLES W. GREENE, Columbia, Mo.

Thursday, June 19—2 p. m.

SYMPOSIUM ON PHYSICAL THERAPEUTICS

Hydrotherapy in Nervous Fatigue. CURRAN POPE, Louisville, Ky.

Some Aspects of Hydrotherapy in the United States. H. M. HALLOCK, Hot Springs, Ark.

Kinesitherapy. R. TAIT McKENZIE, Philadelphia.

Radium in Internal Machine. L. G. ROWNTREE, Baltimore.

Rational Roentgenotherapy by Measured Doses. SIDNEY LANGE, Cincinnati.

What Can be Done in Cancer with Roentgen Rays? W. A. PUSEY, Chicago.

Sarcoma Successfully Treated by the Roentgen Rays: Report of Cases, with Lantern Demonstrations. G. E. PFAHLER, Philadelphia.

SECTION ON PATHOLOGY AND PHYSIOLOGY

CHAIRMAN, A. W. HEWLETT, ANN ARBOR, MICH.; SECRETARY, WILLIAM OPHÜLS, SAN FRANCISCO

Tuesday, June 17—2 p. m.

Chairman's Address: The Relation of Internal Medicine to Pathology and Physiology. A. W. HEWLETT, Ann Arbor, Mich.

SYMPOSIUM ON DIPLOCOCCUS AND STREPTOCOCCUS INFECTIONS

Streptococcus Sore Throat. Its Origin and Transmission. J. A. CAPPS, Chicago.

The Relation of Streptococci to Arthritis. D. J. DAVIS, Chicago.

Studies on Rheumatism, Articular and Muscular. E. C. ROSENOW, Chicago.

A Biologic Classification of Pneumococci by Means of Immunity Reactions and the Relation of Certain Varieties to the Clinical Course of Lobar Pneumonia in Man. A. R. DOCHEZ and L. P. GILLESPIE, New York.

Wednesday, June 18—9 a. m.

Some New Observations on the Physiology of the Stomach in Man and in Dogs. A. J. CARLSON, Chicago.

Movements of the Empty Stomach in Dogs During the Course of Pancreatic Diabetes. A. B. LUCKHARDT, Chicago.

Evidences of Fat Absorption by the Mucosa of the Mammalian Stomach.
CHARLES W. GREENE, Columbia, Mo.

The Physiology of the Pylorus, Pilleus Ventriculi and Duodenum, as Observed Radiographically.
LEWIS GREGORY COLE, New York.

Some Physiologic Properties of Diaphragm Muscle.
FREDERIC S. LEE, New York, and A. E. GUENTHER, Lincoln, Neb.

A Comparative Study of Some Functional Renal Tests.
J. H. AGNEW, Ann Arbor, Mich.

A Clinical Study of Hypercholesteremia.
H. B. SCHMIDT, Ann Arbor, Mich.

Wednesday, June 18—2 p. m.

A Problem in Embryonic Nutrition.
WINFIELD S. HALL, Chicago.

The Relation Between Functional Activity and Depression in Nerve Cells from Anatomic Analysis.
D. H. DOLLEY, Columbia, Mo.

Overresponse to Affective Stimuli from Stationary Cortical Lesions. Report of a Case.
G. WILSE ROBINSON, Kansas City, Mo.

Further Observations with a Saccharomycete.
LORENA M. BREED, Pomona, Cal.

Report of a Case in Which the Bacillus Fusiformis Was Isolated from the Blood.
V P LARSON, Minneapolis.

Tuberculosis of the Uterus with a Report of Three Cases.
JESSIE B HUDSON, Philadelphia.

Thursday, June 19—9 a. m.

Studies on Experimental Nephritis Produced by Tartrates.
FRANK P. UNDERHILL and SAMUEL GOLDSMITH, New Haven, Conn., and H GIDEON WELLS, Chicago.

The Relation of the Pathology and the Clinical Symptoms of Simple and Exophthalmic Goiter.
LOUIS B. WILSON, Rochester, Minn.

The Iodin Content of the Human Thyroid.
E. V. SMITH, Rochester, Minn.

A Comparative Study of the Effects on Blood Pressure of Goiter Extracts, Goiter Serums and Other Substances.
A. H. SANFORD, Rochester, Minn.

The Relation of Acapnia to Shock.
HENRY H. JANEWAY, New York.

Cloudy Swelling.
E. T. BELL, Minneapolis.

Local Lesions Following Intramuscular Injections of Salvarsan and Neosalvarsan.
H. E. ROBERTSON, Minneapolis.

SECTION ON STOMATOLOGY

CHAIRMAN, VIRGIL LOEB, ST. LOUIS; SECRETARY, EUGENE S. TALBOT, CHICAGO

Tuesday, June 17—2 p. m.

Chairman's Address: Fields for Research in Oral Surgery.
VIRGIL LOEB, St. Louis.

Social Ethics.
E. M. WOOLEY, Winona, Minn.

Differential Diagnosis of Mouth Lesions.
STEWART L. MCCURDY, Pittsburgh.

Wednesday, June 18—9:30 a. m.

Correction of Impediments of Speech in Our Public Schools.
H. F. MCBEATH, Milwaukee, Wis.

Pathology of Root-Findings.
VIDA A. LATHAM, Chicago.

Responsibility of Dentist and Physician in Regard to Mouth Infections and Their Relation to Constitutional Effects.
THOMAS B. HARTZELL, Minneapolis.

Bachelor of Medicine: The Need of This New Degree.
WILLIAM C. FISHER, New York.

Wednesday, June 18—2 p. m.

Etiology of Trifacial Neuralgia or Tic Douloureux and Clinical Treatment.
NELSON T. SHIELDS, New York.

A Method of Closing a Sinus Between the Antrum of Highmore and the Mouth.
L. W. DEAN, Iowa City, Iowa.

Treatment of Loose Teeth Due to Inflammatory Degeneration of the Gums and Alveolar Process.
JOSEPH HEAD, Philadelphia.

Bacteriology of Pyorrhea Alveolaris.
CLAUDE P. BROWN, Philadelphia.

Bacteria of the Mouth.
A. H. LEVINGS, Milwaukee, Wis.

Thursday, June 19—9:30 a. m.

Infective Cysts of the Jaws.
F. B. MOOREHEAD, Chicago.

Arrested Development of the Superior Maxillae in Relation to Mental and Physical Efficiency.
JOSEPH S. EVANS, Madison, Wis.

Relation of Mouth-Disease to Bodily Health.
EDWARD H. BAKER, Chicago.

Surgical Treatment of Post-Operation Lip and Palate Defects.
GEORGE V. I. BROWN, Milwaukee, Wis.

The Early Recognition and Treatment of Cancer of the Mouth.
G. BETTON MASSEY, Philadelphia.

Thursday, June 19—2 p. m.

Interstitial Gingivitis and Pyorrhea Alveolaris.
EUGENE S. TALBOT, Chicago.

SECTION ON NERVOUS AND MENTAL DISEASES

CHAIRMAN, HOWELL T. PERSHING, DENVER; SECRETARY, GEORGE A. MOLEEN, DENVER

Tuesday, June 17—2 p. m.

Chairman's Address: Neurasthenia an Increased Susceptibility to Emotion.
HOWELL T. PERSHING, Denver.

Premonitory Auras in Alcoholic Neuroses.
T. D. CROTHERS, Hartford, Conn.

Practical Problems Which Confront the Neurologist.
THEODORE DILLER, Pittsburgh.

Diagnosis, Prognosis and Treatment of General Paresis.
CHARLES R. BALL, St. Paul.

Pathologic Findings in Insanity.
H. D. VALIN, Mankato, Minn.

Wednesday, June 18—9 a. m.

Meningeal Tumors of the Encephalon: Report of a Case, Including Pathologic Findings.
F. E. COULTER and J. S. FOOTE, Omaha.

A Tumor of the Hypophysis in Acromegaly: A Clinical and Post-Mortem Report, with Photomicrographs.
JULIUS GRINKER, Chicago.

Tumors of the Crus Cerebri.
JOHN H. W. RHEIN, Philadelphia.

Acute Types of Disseminated Sclerosis and a Case of Myotonia Atrophica.
ROBERT FOSTER KENNEDY, New York.

Symptomatology of Multiple Sclerosis.
L. HARRISON METTLER, Chicago.

Wednesday, June 18—2 p. m.

Two Cases of Circulatory Disturbance of the Brain.
C. EUGENE RIGGS AND E. M. HAMMES, St. Paul.

Intermittent Closing of Cerebral Arteries in Its Relation to Apoplexy.
ALFRED GORDON, Philadelphia.

Epilepsy and Paresis in Railway Engineers and Firemen.
C. D. CAMP, Ann Arbor, Mich.

Exudative Encephalitis.
ALBERT E. STERNE, Indianapolis.

Morphinomania and Its Treatment.
R. E. BERING, San Francisco.

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Thursday, June 19—9 a. m.

Further Notes on the Preneurasthenic and Preinsane Conditions. ROSS MOORE, Los Angeles.

The Conception of Homosexuality: Its Theories, Psychologic Mechanisms and Treatment. A. A. BRILL, New York.

A Division of the Auditory Nerve for Persistent Tinnitus and Vertigo CHARLES H. FRAZIER, Philadelphia.

Demonstration of Lange's Goldsol Test of the Cerebrospinal Fluid. B. W. SIPPY, Chicago.

Thursday, June 19—2 p. m.

Unusual Symptoms of Tabes Dorsalis.
T. H. WEISENBURG, Philadelphia.

Multiglandular Syndromes and the Nervous System, with Lantern-Slide Demonstration.
D'ORSAY HECHT, Chicago.

The Interpretation of the Scaphoid Type of Scapula.
WILLIAM W. GRAVES, St. Louis.

Occlusion of the Posterior Inferior Cerebellar Artery. Report of a Case. G. WILSE ROBINSON, Kansas City, Mo.

Two Cases of Tumor of the Pons: I. Sarcoma; II. Glio-Sarcoma with Hemorrhage.
W. H. BODENSTAB, Bismarck, N. D.

Certain Nervous Phenomena in Pernicious Anemia.
C. EUGENE RIGGS, St. Paul.

SECTION ON DERMATOLOGY

CHAIRMAN, JOSEPH ZEISLER, CHICAGO; SECRETARY, HOWARD FOX, NEW YORK CITY

Tuesday, June 17—2 p. m.

Chairman's Address: Our Tendency to Fads.
JOSEPH ZEISLER, Chicago.

Two Cases of Pemphigus Foliaceus. J. B. KESSLER, Iowa City.

An Anomalous Case of White-Spot Disease.
H. H. HAZEN, Washington, D. C.

Comparison of Methods of Treating Epithelioma.
RUSSELL H. BOGGS, Pittsburgh.

Radium in Skin Diseases. FRANK E. SIMPSON, Chicago.

The Massive Dose X-Ray Method in the Treatment of Skin Diseases. GEORGE M. MACKEE, New York.

Neuromas of the Skin (with Lantern-Slide Demonstration).
M. L. HEIDINGSFELD, Cincinnati.

Angioma Serpiginosum (Infective Angioma of Hutchinson) with Report of a Very Extensive Case.
FRED WISE, New York.

Wednesday, June 18—9 a. m.

Demonstration of Patients.

The Fight Against Syphilis as a Plague in the Light of the Latest Researches. E. HOFFMANN, Bonn, Germany.

Two and One-Half Years' Experience with Salvarsan and Neosalvarsan; Technic, Results and Question of Neurorecidive.
WILLIAM THOMAS CORLETT AND HAROLD NEWTON COLE, Cleveland.

Salvarsan and Profeta's Law. A. RAVOGLI, Cincinnati.

A Study of the Spinal Fluid in One Hundred Cases of Syphilis.
M. F. ENGMAN AND RUDOLPH BUHMAN, St. Louis.

Comparative Study of Antigens for the Wassermann Reaction.
H. R. VARNEY AND F. W. BAESLACK, Detroit.

Wednesday, June 18—2 p. m.

The Histopathology of Pompholyx.
RICHARD L. SUTTON, Kansas City.

Skin Diseases Among the Indians of Oklahoma.
EVERETT S. LAIN, Oklahoma City.

Newer Cutaneous Mycoses.
ERNEST DWIGHT CHIPMAN, San Francisco.

Cutaneous Affections of Childhood. ALFRED SCHALEK, Omaha.

"Cancer en Cuirasse" on Thigh. MARCUS HAASE, Memphis.

Thursday, June 19—9 a. m.

Demonstration of Patients.

Relation of Diabetes to Various Dermatoses.
BURNSIDE FOSTER, St. Paul.

Relation of Certain Changes in the Urine to Various Skin Diseases. HENRY C. BAUM, Syracuse.

Empiricism in Dermatologic Therapeutics.
M. L. RAVITCH, Louisville.

Primary Sarcoma of the Lower Lip. A. J. MARKLEY, Denver.

Idiopathic Atrophy of the Skin with Report of a Case.
H. G. IRVINE, Minneapolis.

Mycosis Fungoides Following Psoriasis.
HOWARD FOX, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

CHAIRMAN, GUY L. KIEFER, DETROIT; SECRETARY, C. HAMPSON JONES, BALTIMORE

Tuesday, June 17—2 p. m.

Chairman's Address and Oration on State Medicine: Progress in Public Health Work. GUY L. KIEFER, Detroit.

Morbidity Reports: Their Purpose and Present Status.
J. W. TRASK, Washington, D. C.

The Need for Whole-Time Health Officers.
HAROLD B. WOOD, Rochester, Minn.

Wednesday, June 18—9 a. m.

Experiences of a Health Officer in Porto Rico.
E. F. OTIS, Penelas, Porto Rico.

Rural Hygiene: Its Relation to Municipal Health.
WALTON FORREST DUTTON, Carnegie, Pa.

The Treatment of Diphtheritic Carriers.
HENRY ALBERT, Iowa City, Iowa.

Public Health Work. W. C. RUCKER, Washington, D. C.

Wednesday, June 18—2 p. m.

Duration of Immunity Following Small-Pox.
A. W. LESCOHIER, Detroit.

The Value of Sanitation as Applied to Railways and Other Large Corporations.
M. CLAYTON THRUSH, Norwich, N. Y.

The Epidemiology of Paratyphoid Fever.
A. W. FREEMAN, Richmond, Va.

Isolation of the Typhoid Bacillus from Milk Which Caused a Typhoid Outbreak.
WILLIAM ROYAL STOKES AND HARRY W STONER, Baltimore.

Thursday, June 19—9 a. m.

Field Work in Tuberculosis. MARY E. LAPHAM, Highland, N. C.

Early Diagnosis of Pulmonary Tuberculosis.
V. C. VAUGHAN, JR., Detroit.

Thursday, June 19—2 p. m.

Preventive Medicine. J. R. WILLIAMS, Rochester, N. Y.

The Backward Child in School.
FRANCIS FRONCZAK, Buffalo, N. Y.

Production of Agglutinins and Bacteriolysins by Inoculation with Mixed Typhocolon Vaccine.
C. J. HUNT, Harrisburg, Pa.

The Use of Blood Agar in Routine Examination of Milk Sediments. F. W. HACHTEL, Baltimore.

SECTION ON GENITO-URINARY DISEASES

MEETS IN ROOM 301, FOLWELL HALL, OLD CAMPUS

CHAIRMAN, HUGH H. YOUNG, BALTIMORE; SECRETARY, LOUIS E. SCHMIDT, CHICAGO

Tuesday, June 17—2 p. m.

SYMPOSIUM ON DISEASES OF KIDNEY AND URETER

A Study of the Normal Kidney, Its Pelvis and Ureter, with Stereopticon Views.
S. B. CHILDS and W. M. SPITZER, Denver.

Stereopticon Views of Pathologic Conditions of the Ureter and Kidney, with Methods of Examination and Their Bearing on Diagnosis. BRANSFORD LEWIS, St. Louis.

Renal Hematuria. W. F. BRAASCH, Rochester, Minn.

Experimental Kidney Surgery. O. S. FOWLER, Denver.

Untoward Results of Nephrolithotomy.
M. KROTOSZYNER, San Francisco.

The Use of Indigocarmin Intravenously.
HENRY DAWSON FURNISS, New York.

The Value of Various Functional Tests in the Differential Diagnosis of Renal Diseases.
JOHN T. GERAGHTY, Baltimore.

Wednesday, June 18—9 a. m.

Ureterovesical Cysts: An Endovesical Operative Procedure for Their Relief. J. R. CAULK, St. Louis.

The Formation of a New Ureter: Experimental Study.
D. N. EISENDRATH, Chicago.

Implantation of the Ureter into the Bowel, with Report of Two Cases. CARL BECK, Chicago.

SYMPOSIUM ON BLADDER TUMORS

Chairman's Address: The Present Status of the Diagnosis and Treatment of Tumors of the Bladder.
HUGH H. YOUNG, Baltimore.

The Diagnosis and Treatment of Papillary, More or Less Pedunculated Tumors of the Bladder.
HOWARD A. KELLY, Baltimore.

Chronic Cystitis in Women Not a Disease.
GEORGE G. SMITH, Boston.

Wednesday, June 18—2 p. m.

The Transverse Incision of the Skin and Abdominal Fascia as a Method of Approach in Suprapubic Operations on the Bladder and Prostate.
GRANVILLE MACGOWAN, Los Angeles.

Pathology of the Prostate, with Lantern-Slide Demonstration.
E. O. SMITH, Cincinnati.

Operative Treatment of the Vas.
EDWARD MARTIN, Philadelphia.

Radiographic Observations of Pus-Tubes in the Male.
WILLIAM T. BELFIELD, Chicago.

Surgery of the Seminal Vesicles.
J. BENTLEY SQUIER, New York.

Thursday, June 19—9 a. m.

SYMPOSIUM ON DISEASES OF THE TESTICLE

Undescended Testicle.
B. TENNEY and H. M. CHASE, Boston.

Operative Treatment of Undescended Testis.
ARTHUR DEAN BEVAN, Chicago.

Transplantation of the Testicle.
V. D. LESPINASSE, Chicago.

Gumma of the Testicle. JOHN H. CUNNINGHAM, JR., Boston.

The Probable Embryonic Origin of Tumors of the Testicle, with Report of Two Cases and Lantern-Slide Demonstration. A. C. STOKES, Omaha.

Primary Tuberculosis of the Genital Organs in Children.
O. LYONS, Denver.

The Operative Treatment of Genital Tuberculosis.
HUGH CABOT, Boston.

The Operation for Varicocele.
G. S. WHITESIDE, Portland, Ore.

Thursday, June 19—2 p. m.

The Pseudodiphtheria Organism in the Urinary Tract.
P. W. W. TOWNSEND, Rutland, Vt.

Gonorrhea: Pathology and Treatment.
CARL C. WARDEN, Los Angeles.

An Experimental Study of the Value of the Internal Use of Hexamethylenamin, with the Report of a Simple Clinical Method of Quantitative Estimation of Formaldehyd. FRANK HINMAN, Baltimore.

Indurations and Ossifications in the Shaft of the Penis.
GUSTAV KOLISCHER, Chicago.

The Diagnosis of the Primary Syphilitic Lesion.
R. GRADWOHL, St. Louis.

Clinical and Laboratory Salvarsan Relapses and Their Remedy. M. L. HEIDINGSFELD, Cincinnati.

Progress in the Treatment of Syphilis.
VICTOR VECKI, San Francisco.

SECTION ON HOSPITALS

MEETS IN PHARMACY BUILDING (OLD MILLARD HALL), OLD CAMPUS

OFFICERS OF SECTION

CHAIRMAN, H. B. HOWARD, BOSTON; SECRETARY, JOHN A. HORNSBY, CHICAGO

Tuesday, June 17—2 p. m.

Chairman's Address: H. B. HOWARD, Boston.

SYMPOSIUM ON HOSPITAL ARCHITECTURE

The Trend of European Hospital Architecture.
EDWARD F. STEVENS, Boston.

Architecture of the Great Charity Hospital.
RICHARD E. SCHMIDT, Chicago.

Architecture of the Modern Hospital for Contagious Diseases.
L. A. LAMOREAUX, Minneapolis.

Equipment of a Small Hospital. Making Over a Dwelling House. JOHN ALLAN HORNSBY, Chicago.

Wednesday, June 18—9 a. m.

Selection of Hospital Help under Civid Service Rules.
LEONHARD FELIX FULD, New York.

Administration of the Great Charity Hospital.
RUPERT NORTON, Baltimore.

Hospital and Asylum Work Shops: Some Possibilities of Handicapped Labor.
HERBERT J. HALL, Marblehead, Mass.

Possibilities in the Routine Practice of a Small Hospital.
HERBERT C. COLE, Bogalusa, La.

The Psychopathic Idea. E. E. SOUTHARD, Boston.

Report on the Present Status in the Campaign for the Standardization and Classification of Hospitals.
HENRY M. HURD, Baltimore.

Thursday, June 19—9 a. m.

SYMPOSIUM ON TRAINED NURSING

Efficiency Versus Routine in Hospital Nursing.
W. GILMAN THOMPSON, New York.

The Trained Nurse from the Standpoint of the Attending Surgeon. ARTHUR DEAN BEVAN, Chicago.

The Trained Nurse of the Future.
RICHARD O. BEARD, Minneapolis.

The Nursing Situation as It Is To-day.
JOSEPH B. HOWLAND, Boston.

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SECTION ON ORTHOPEDIC SURGERY

CHAIRMAN, NEWTON M. SHAFFER, NEW YORK; SECRETARY, JOHN RIDLON, CHICAGO

Tuesday, June 17—2 p. m.

Chairman's Address: The Functions of the Knee-Joint, with Especial Reference to Mechanical Treatment of Acute and Chronic Lesions of the Articulations.
NEWTON M. SHAFFER, New York.

New Immigration as It Affects Orthopedic Surgery.
WALLACE BLANCHARD, Chicago.

Infected Joints from Diseased Tonsils and Teeth or Other Diseased Parts. J. W. COKENOWER, Des Moines, Iowa.

Charcot Joints as an Initial or Early Symptom of Tabes Dorsalis. HENRY LING TAYLOR, New York.

Causes of Error in the Diagnosis of Joint Disease.
WISNER R. TOWNSEND, New York.

Wednesday, June 18—9 a. m.

Injections in Treatment of Joint Tuberculosis.
LEONARD W. ELY, Denver.

Conservative Treatment of Hip-Joint Disease.
JAMES K. YOUNG, Philadelphia.

Results in Non-Surgical Treatment of Joint Tuberculosis.
H. WINNETT ORR, Lincoln, Neb.

Tuberculosis of the Hip: An Analysis of the Present Methods.
NATHAN ALLISON, St. Louis.

Pathologic Deviations in the Size of Bone.
S. L. MCCURDY, Pittsburgh.

Wednesday, June 18—2 p. m.

Hip-Fractures, Their Adequate Treatment.
F. J. COTTON, Boston.

Ivory Plates and Screws to Hold Fractures.
PAUL B. MAGNUSON, Chicago.

Surgery of Spine Transplants. HARRY B. THOMAS, Chicago.

The Fate of Transplanted Bone and of Detached Fragments in Comminuted Fractures. D. B. PHEMISTER, Chicago.

Bone-Graft Treatment for Pott's Disease, Ununited Fractures and Certain Deformities. FRED H. ALBEE, New York.

Results Obtained by Operating on the Spine for Pott's Disease.
JOHN JOSEPH NUTT, New York.

Thursday, June 19—9 a. m.

Hollow Foot, Pes Cavus. CHARLES A. PARKER, Chicago.

Anatomic Variations in the Human Foot and Their Importance in the Selection of Footwear.
CHARLES F. PAINTER, Boston.

Rôle of the Tendo Achillis in the Etiology of Weak Foot.
EMIL GEIST, Minneapolis.

Surgery of Infantile Paralysis. EDWARD W. RYERSON, Chicago.

Silk Tendons, Their Uses and Limitations.
HARRY M. SHERMAN, San Francisco.

Criticism of Lange's Silk Ligaments in Paralytic Surgery and Substitutes Therefor. EDWARD A. RICH, Tacoma, Wash.

Thursday, June 19—2 p. m.

The Whitman Operation for Talipes Calcaneus Paralyticus. Results in Eighteen Cases. JOHN P. LORD, Omaha.

Rational Treatment of Extreme Scoliosis.
E. A. RICH, Tacoma, Wash.

The Fixed Structural Type of Spinal Lateral Curvature.
R. O. MEISENBACH, Buffalo, N. Y.

Relation of Politics to the State Care of Crippled.
H. W. ORR, Lincoln, Neb.

Osteochondritis Dissecans: Three Cases.
JOHN RIDLON, Chicago.

Disarticulation at the Knee-Joint.
F. J. GAENSLEN, Milwaukee, Wis.

OUTLOOK OF THE SCIENTIFIC EXHIBIT FOR THE MINNEAPOLIS MEETING

It is a pleasure to announce that the outlook of the Scientific Exhibit for the coming meeting is most encouraging. The new Institute of Anatomy Building, chosen to house the exhibit, affords ample facilities for any scientific presentation which may be desired. The location is advantageous with reference to Registration Headquarters and the meeting-places of sections. The building is three stories high, well lighted and admirably arranged. It contains several lecture-rooms with lantern and like equipment, large rooms suited to the arrangement of allied groups and smaller rooms adapted to the demonstration of individual exhibits. These very attractive features will appeal with force to scientific workers who have often chafed under the unavoidable shortcomings of quarters offered. In fact, the facilities which will be offered this year are so good that there is danger it may spoil us for accepting gracefully the quarters which necessity may force on us at succeeding meetings.

For twelve years exhibitors have been so often besought to make systematic demonstrations of their exhibits that the exhortation has become trite. The sentiment in favor of and the practice of carrying on these demonstrations has grown very slowly, partly from failure to appreciate the opportunity given, and partly because of lack of facilities. Scientific workers are coming to realize that such demonstrations not only are instructive to the hundreds who see them, but also afford unusual opportunity for the scientific investigator to show to the medical world the fruits of his research.

In the realm of pathology, numerous research exhibits will be presented at the coming meeting. Noteworthy will be those relating to cancer and thyroid disease, which will be very fully illuminated by material from the very best sources, giving the latest on the subjects. Those interested in these topics or having pathologic material illustrating them should communicate with Dr. Louis B. Wilson, Rochester, Minn.

The great prominence which pathology has always occupied in the exhibit should not discourage but rather stimulate other fundamental branches to larger representation. One of the most striking exhibits shown a year ago was in the field of experimental physiology. Experimental pharmacology should certainly be able to contribute something of great interest. Anatomy has given assurance of creditable representation.

An exhibit of great practical interest will be that by the Committee on Anesthesia, showing recent advances in anesthesia. Exhibits of work in the physiology, pathology and pharmacology of the subject, and of apparatus and methods will be received. Commercial houses will not be permitted to give exhibits. Arrangements for clinical demonstrations will be made if possible. The purpose of the exhibit is to bring together men interested in anesthesia from all parts of the country, and to give them an opportunity to profit by one another's work. Those wishing to take part in this exhibit will address Dr. W. D. Gatch, Chairman of the Committee on Anesthesia, Room 605, Hume-Mansur Building, Indianapolis.

It is hoped to secure from year to year larger participation by those engaged in the work of clinical medicine and surgery. One of the greatest difficulties and most important phases in the future evolution of the Scientific Exhibit, is to bring the clinicians into closer touch with this work. The participants in Section programs should likewise give tangible and convincing demonstrations in the Scientific Exhibit. There is hope that some advance will be made at the coming session in this direction.

Radiography has recently attained such importance in diagnosis that it will of necessity occupy a prominent position at this session. It is proposed this year to confine the work largely to the recognition of pulmonary and gastro-intestinal conditions. The assembling of these exhibits will be in charge of Dr. R. D. Carmen of Rochester, Minn. Those who contemplate participating should make known to him in good season their intention, indicating the subject and the number and size of plates to be shown.

Public health and hospital exhibits will be limited to the newer things, such as devices for teaching the laity the lessons of hygiene, disease causation and prevention; motion pictures and automatic lantern exhibits.

As heretofore, certificates of honor will be awarded to a few of the especially meritorious exhibits. A gold medal will be given for the best research exhibit relating to any of the fundamental branches of medicine. This, however, does not make it obligatory for all research exhibits to be entered in competition.

Inquiries concerning the character and amount of space desired, apparatus or equipment, should be directed to Dr. Thomas G. Lee, Institute of Anatomy, University of Minnesota, Minneapolis. Exhibits should be shipped in ample time to arrive by Thursday, June 12. This will permit installation not later than Monday, and make certain that the exhibits will be in position for the inspection of the hundreds of visitors who will come on Tuesday morning.

Prospective exhibitors are requested to make known their intentions to the director, Dr. Frank B. Wynn, 311 Newton Claypool Building, Indianapolis, at the earliest possible date, giving the scope and character of what it is desired to show.

BUREAUS OF INFORMATION

Members of a committee of reception will be assigned to each railway station and will meet and direct arriving guests to their hotel destinations. Bureaus of information will be established at stations, hotels and meeting-places for consultation with visitors. A special committee of women physicians will take care of their professional associates, considerable numbers of whom will attend the meeting from abroad.

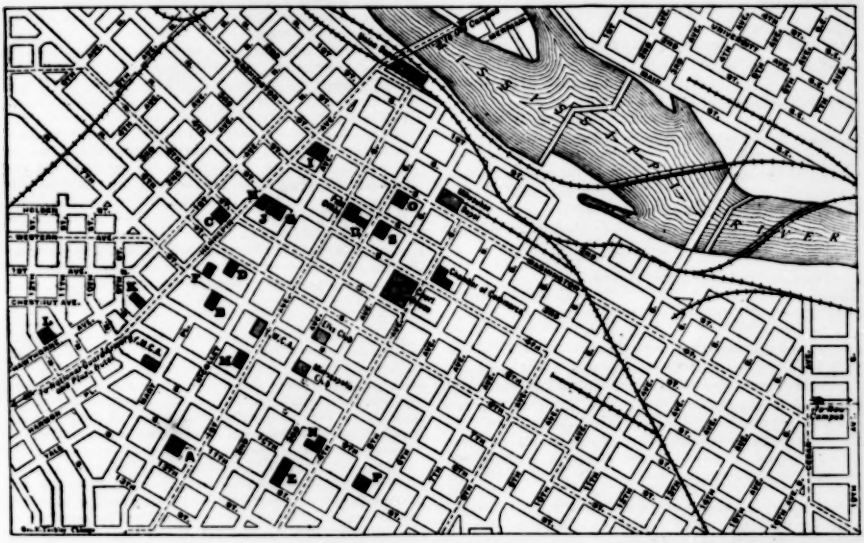

Fig. 19.—The Business Center of Minneapolis.

KEY TO MINNEAPOLIS MAP

A. AUDITORIUM. Nicollet Ave. and S. 11th St.—OPENING MEETING.

B. RADISSON. S. 7th St., between Hennepin and Nicollet Ave.—GENERAL HEADQUARTERS.

C. WEST. Hennepin and N. 5th St.—PRACTICE OF MEDICINE, PATHOLOGY AND PHYSIOLOGY, DERMATOLOGY, HOSPITALS, NERVOUS AND MENTAL DISEASES.

D. DYCKMAN. S. 6th St., between Hennepin and Nicollet Ave.—OPHTHALMOLOGY.

E. LEAMINGTON. 3d Ave. South, and 10th St.—SURGERY.

F. MAJESTIC. Hennepin Ave. and S. 7th St.—PHARMACOLOGY AND THERAPEUTICS. DISEASES OF CHILDREN.

G. ROGERS. Nicollet Ave. and S. 4th St.—PREVENTIVE MEDICINE AND PUBLIC HEALTH.

H. ANDREWS. Hennepin and S. 4th St.—OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY.

I. NICOLLET. Washington and Hennepin Aves.—STOMATOLOGY.

J. VENDOME. South 4th St., between Hennepin and Nicollet Ave.—GENITO-URINARY DISEASES.

(NOTE: PLAZA, 17th and Hennepin Ave.—LARYNGOLOGY, OTOLOGY AND RHINOLOGY. Southwest on Henepin Ave., beyond area shown in map. ST. PAUL HOTEL, St. Paul—ORTHOPEDIC SURGERY.)

[NOTE: A table of hotels and rates is on page 1505.]

EXPLANATION OF STREET CAR SERVICE

There are two street car lines leading from the center of Minneapolis to the Campus. Cars moving south-east on South Washington Street, marked "Minneapolis and St. Paul" go to the New Campus, passing through the Campus on Washington Avenue, South-East. This line goes directly to St. Paul.

Cars moving north-east on Hennepin Avenue, marked "Como-Harriet" and "Oak and Harriet," pass the Union Station, crossing the Mississippi River and approaching the Old Campus on Fourth Street, South-East. The Old Campus may be entered either from Fourteenth Avenue, South-East, or Fifteenth Avenue, South-East. The Como-Harriet line terminates in St. Paul. From both the Old and New Campus the lines mentioned return to Minneapolis by the same route taken in going to the Campus.

From St. Paul, the Old Campus is approached by the Como-Harriet cars, and the New Campus by cars marked "St. Paul-Minneapolis."

THE MEETING-PLACES

The Campus of the University of Minnesota is divided by the tracks of the Northern Pacific Railroad into two parts. That north of the railroad is known as the Old Campus, the part south of the railroad tracks, as the New Campus.

The meeting places are listed in recognition of this division as follows:

OLD CAMPUS

1. BUREAU OF REGISTRATION, BUREAU OF INFORMATION, POST-OFFICE AND COMMERCIAL EXHIBIT—ARMORY.
3. SURGERY—LIBRARY, Chapel.
4. OPHTHALMOLOGY—LAW SCHOOL, Room 106.
5. LARYNGOLOGY, OTOLOGY AND RHINOLOGY—SHEVLIN HALL, Assembly Room.
7. DISEASES OF CHILDREN—PHYSICS BUILDING, Lecture Room.
9. STOMATOLOGY—COLLEGE OF DENTISTRY, Room 308

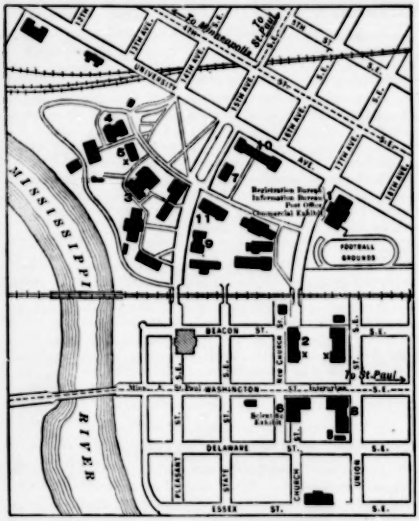

Fig. 20.—The Scientific Meeting-Places.

10. NERVOUS AND MENTAL DISEASES—FOLWELL HALL, Room 311.
10. DERMATOLOGY—FOLWELL HALL, Room 214.
10. GENITO-URINARY DISEASES—FOLWELL HALL, Room 301.
11. HOSPITALS—CHEMISTRY BUILDING, Amphitheater.

NEW CAMPUS

2. HOUSE OF DELEGATES—ENGINEERING BUILDING, Library.
2. PRACTICE OF MEDICINE—ENGINEERING BUILDING, AUDITORIUM, Room 305.
6. OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY—INSTITUTE OF ANATOMY, AMPHITHEATER, Room 102.
8. PHARMACOLOGY AND THERAPEUTICS—MILLARD HALL, Room 214.
6. PATHOLOGY AND PHYSIOLOGY—INSTITUTE OF ANATOMY, Room 104.
8. PREVENTIVE MEDICINE AND PUBLIC HEALTH—MILLARD HALL, Room 128.
2. ORTHOPEDIC SURGERY—ENGINEERING BUILDING, Room 106.
6. SCIENTIFIC EXHIBIT—INSTITUTE OF ANATOMY.

POST-OFFICES AND TELEPHONES

An *Association Post-Office* will be maintained at the Registration Department in the Armory on the *University Campus*. Guests are requested to order mail addressed to them in these italicized terms or to their hotels, as preferred.

Telephone booths will be provided at each meeting-place for the use of members.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit of the Association meeting will be displayed in the Institute of Anatomy on the new campus, where ample room, superior lighting and suitable equipment will enhance the values of the exhibits presented. An announcement by the director of the Scientific Exhibit appears on page 1455.

REGISTRATION

The Importance of Registering Early—A Few Instructions Given

The Bureau of Registration will be located on the Campus of the University of Minnesota in the University Armory. A committee of sixteen local physicians will assist members in registration.

A branch post-office will be opened and a Bureau of Information established in connection with the Registration Bureau.

Members must register in order to obtain the official badge and program. The badge will be necessary for admission to entertainments. All are urged to register as soon as they can name their hotels.

The Registration Department will be open from 8:30 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 16, 17, 18 and 19, and from 9 to 10 a. m. on Friday, June 20.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out the registration card. One should write very plainly, or print, as the cards are given to the printer to use as "copy" for putting the names in the daily *Bulletin*.

2. *Each member who has paid his annual dues* in full will present his pocket card (which was sent him from the Chicago office) and his filled-out registration card at a window marked "Registration by Pocket Card."

3. A delay, in order that the records may be consulted, always inconveniences those members who have paid their dues but who fail to present their pocket cards, as suggested above. Be sure to bring your "pocket card."

4. *Members who have not paid* their dues will present registration card and make payment at a window marked "Cash."

5. *Each applicant for membership* will present his registration card at the window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 535 Dearborn Avenue, Chicago, so as to arrive not later than June 5.

6. Each member on registering will receive a badge, a copy of the Official Program containing a full announcement of the scientific proceedings, invitations to the social functions, and such other notices as may be of interest.

STATE SECRETARIES' MEETING

The Association of State Secretaries and Editors will hold its seventh annual meeting at Minneapolis at 7 o'clock in the evening of June 16. A further announcement will be made by its secretary.

PUBLIC HEALTH SUNDAY

The week of the Association meeting in Minneapolis will be opened with Public Health Sunday, June 15. The Ministers'

Associations, the Bishop of the Diocese and the Episcopal clergy, and the individual churches of the city, have almost unanimously joined this movement and will devote one or more of the services of the day to the discussion of health topics of large public interest. The Council on Health and Public Instruction will provide for each pulpit which extends an invitation a trained public speaker, who will assist the pastor in the presentation of a chosen theme. The occasion will be a notable one and will awaken public interest, not only in the meeting of the Association, but also in the more permanently important questions of personal hygiene and communal sanitation.

NOONDAY LUNCHEONS

At the noon hours of Tuesday, Wednesday and Thursday, June 17, 18 and 19, a complimentary buffet luncheon will be served at several points on the University Campus, for attending physicians and attendants on exhibits.

These luncheons will be had in Shevlin Hall, on the old Campus, and at the main engineering building and the experimental engineering laboratory on the new Campus. (X on University Campus map.) Ample provision will be made for the visiting members of the Association.

THE PRESIDENT'S RECEPTION

The President's reception on Wednesday evening, June 18, will be given in the National Guard Armory, on the Parade, opposite Loring Park. Dancing will follow the reception proper, and music will be furnished by the First Regiment Band. The Armory annex will be transformed into an indoor garden, which will serve as an attractive lounging-place for guests. A number of refreshment tables will be scattered about the annex garden and the Minneapolis Symphony Orchestra will render a musical program in this attractive retreat.

SOCIAL ENTERTAINMENTS

Minneapolis is a city which is fair to behold alike in its commercial center, its residence districts, its intra-urban parks and parkways and its beautiful suburban surroundings. Automobile drives will be planned for the intervals between the meetings, which will give the city's guests the opportunity to appreciate these beauties.

While the doctors deliberate, the Ladies' Committee on Entertainment will be busy with the wives and daughters of visiting members.

Ladies, on reaching the city, are urged to make their official registration, through the medical members, at the University Armory and then to appear at the Ladies' Headquarters at the Radisson Hotel and register there. This will enable them to secure official programs of entertainment, to select the opportunities of excursion they prefer and to obtain tickets for selected trips.

Ladies of the committee will always be in attendance at headquarters Radisson Hotel to give any information desired in the way of addresses, routes of transit, railway transportation, hours of entertainment, etc. Visitors who wish to shop will receive directions or will be piloted to stores they care to visit.

Afternoon tea will be served at the Ladies' Headquarters every day from 3 to 5 o'clock. A rest-room will be always available.

Tuesday afternoon, June 17, Mrs. W. A. Jones and Mrs. Horace Lowry will extend invitations to musicales to be given at their homes. Wednesday, June 18, the women guests will be taken for a day's outing to Lake Minnetonka, under the guidance of Mrs. A. W. Abbott. The excursion will be made by trolley and will include luncheon at the Lafayette Club, a tour of the lake if the weather is favorable, and a return by special train in the afternoon. Thursday, June 19, will be spent by the women visitors at the Minnekahda Club, under the leadership of Mrs. Arthur A. Law. In the morning at 11 o'clock, a bridge tournament, a putting contest and a tennis tournament will be arranged. From 12:30 to 2 luncheon will be had at the club. Further matches will be concluded in the afternoon and prizes will be awarded. At 4:30, tea will be served, to which the men of the Association will also be invited. On both Thursday and Friday mornings, June 19 and 20, automobile drives will be arranged for the women, under the directorship of Mrs. A. S. Hamilton. Preference will be given, on Thursday, to those visitors who cannot remain in the city on the succeeding day, and who may not wish to spend the entire day at the Minnekahda Club. On the afternoon of Friday, June 20, Mrs. Willis Walker will give a tea to the visiting women in the Walker Art Galleries.

These more formal plans will interest the majority of the visitors; but for any groups of women who may be interested, shorter trips will be arranged, with committee guides, to the public or private hospitals, to the public library, the art galleries, the flour mills, the public baths, the filtration plant, the city playgrounds, the charitable institutions, the state capitol at St. Paul, etc.

ENTERTAINMENT TENDERED BY THE PROFESSION OF MEDICINE IN ST. PAUL

Thursday evening, June 19, at 8 o'clock, the members of the Association and their ladies are cordially invited to be the guests of the physicians of St. Paul.

An entertainment will be given and refreshments will be served in St. Paul's great Auditorium, which is amply large enough to accommodate all who may wish to come. For visitors staying in St. Paul, it will be but a few steps to the Auditorium. Automobiles will be provided for those who are in attendance on meetings at the University, and the several interurban trolley lines furnish frequent service to the Auditorium for any who prefer to come in that way. No pains will be spared to make the evening one of delight.

ALUMNI REUNIONS

Alumni Associations that may desire to hold reunions during the meetings of the American Medical Association are requested to communicate, through their secretaries, with Dr. E. K. Green, Secretary of the Committee on Alumni Meetings, Reid Corner, Minneapolis, the date desired for such meetings and any suggestions of entertainments they may wish to provide should be stated. Places of meeting or entertainment will be selected for them on request.

THE SECTION BANQUETS

The customary banquets of the sections of the Association will occur on Tuesday evening, June 17, at 7:30 o'clock (unless otherwise announced). Tickets are obtainable from the secretaries of the respective sections.

Arrangements have been completed for the following entertainments:

The Section on Medicine at Donaldson's Café.

The Section on Surgery at the West Hotel.

The Section on Nervous and Mental Diseases at the Interlachen Club.

The Section on Obstetrics, Gynecology and Abdominal Surgery at the Radisson Hotel.

The Section on Diseases of Children at the Minneapolis Club, at 7 p. m.

The Sections on Ophthalmology, and on Laryngology, Rhinology and Otology at the Dyckman Hotel.

The Section on Orthopedics, St. Paul (place unannounced).

BANQUET OF WOMEN PHYSICIANS

The Annual Banquet of the Women Physicians of the Association will be given at the Hotel Leamington, on Third Avenue and Tenth Street South, Tuesday evening, June 17, at 7:30 o'clock. Cards for the banquet will be obtainable at the Registration Bureau.

The Committee for Public Health Education Among Women will meet at 7:30 p. m., Monday, June 16, in Room 128, Millard Hall.

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PROGRAM OF CLINICS

The Committee on Clinics has arranged for a public lecture by an eminent member of the profession from abroad, Monday afternoon, June 16, at 2 o'clock, in the University Chapel. Also on June 16, at 8 p. m. in the University Chapel, Dr. Theodore H. Weisenburg of Philadelphia will give a series of moving pictures illustrating various phases of nervous diseases. Arrangements, as yet incomplete, will be made for a Friday afternoon and evening program. Saturday morning, June 21, operative clinics will be conducted by local surgeons in all of the leading hospitals in Minneapolis.

LOCAL COMMITTEE ON ARRANGEMENTS

Frank C. Todd, Chairman.
Jennings C. Litzenberg, Sec. Charles G. Weston, Treas.

COMMITTEE ON FINANCE
George Douglas Head, Chairman. Earle R. Hare, Secretary.

COMMITTEE ON CLINICS
James E. Moore, Chairman. A. C. Strachauer, Secretary

COMMITTEE ON ENTERTAINMENT
Thomas S. Roberts, Chairman. J. Fowler Avery, Secretary.

COMMITTEE ON SECTION ENTERTAINMENTS
Archa E. Wilcox, Chairman. R. T. LaVake, Secretary.

COMMITTEE ON OUTSIDE EXCURSIONS
H. H. Kimball, Chairman. John H. Morse, Secretary

COMMITTEE ON SCIENTIFIC EXHIBITS
Thomas G. Lee, Chairman. Fred L. Adair, Secretary

COMMITTEE ON AUTOMOBILE DRIVES
E. C. Robitshek, Chairman. Charles E. Dutton, Secretary.

COMMITTEE ON REGISTRATION
Arthur T. Mann, Chairman. A. S. Hamilton, Secretary

COMMITTEE ON HOTELS
S. Marx White, Chairman. E. J. Huenekens, Secretary

COMMITTEE ON HALLS AND MEETING PLACES
H. E. Robertson, Chairman. E. T. Bell, Secretary

COMMITTEE ON POSTOFFICES AND TELEPHONES
C. A. Donaldson, Chairman. C. O. Maland, Secretary.

COMMITTEE ON ALUMNI MEETINGS
Richard J. Hill, Chairman. E. K. Green, Secretary.

COMMITTEE ON PRINTING
J. Grosvenor Cross, Chairman. E. S. Strout, Secretary.

COMMITTEE ON NON-AFFILIATED ORGANIZATIONS
Horace Newhart, Chairman. W. H. Condit, Secretary.

COMMITTEE ON PRESS AND PUBLICITY
Richard Olding Beard, Chairman. S. E. Kerrick, Secretary

COMMITTEE ON PROGRAM
John W. Bell, Chairman. E. J. Huenekens, Secretary

COMMITTEE ON WOMEN PHYSICIANS
Eleanor J. Hill, Chairman. Laura Lane, Secretary

COMMITTEE ON RECEPTION AT RAILROADS
F. A. Knights, Chairman. M. J. Lynch, Secretary

COMMITTEE ON COMMERCIAL EXHIBITS
Charles H. Bradley, Chairman. A. E. Hedback, Secretary

COMMITTEE ON GENERAL HOSPITALITY, INFORMATION AND ATTENDANCE
Arthur E. Benjamin, Chairman. C. H. Keene, Secretary

COMMITTEE ON LOCAL TRANSPORTATION
A. H. Parks, Chairman. E. A. Moren, Secretary

COMMITTEE ON PRESIDENT'S RECEPTION
Arthur A. Law, Chairman. Henry Wireman Cook, Secretary.

CONTINUED ON PAGE 1504

Special Article

BACTERIAL VACCINE THERAPY: ITS INDICATIONS AND LIMITATIONS*

(Continued from page 1361)

VACCINE THERAPY AND SERUM THERAPY DEFINED

That the popularity of clinical vaccine therapy has far exceeded its scientific aspects is clearly shown by the still prevailing uncertainty which exists in the minds of many relative to the exact nature of serum and vaccine therapy. In the lay mind all efforts in the direction of biologic therapy are classed as serum therapy, and even among physicians it is common to find this confusion. Except for the extracts used in organotherapy, it is not unusual to find both laymen and physicians designating all biologic products as "serums" and all biologic therapy as "serum therapy."

As far as practical medicine is concerned serum therapy was the predecessor of vaccine therapy by about fifteen years. Serum therapy is a method of producing passive immunity for either protective or curative purposes by the introduction of the blood-serum of another animal which has been immunized by injecting bacterial toxins or the bacteria themselves. Sometimes both toxins and bacteria are used. A curative or protective serum, then, is actually the serum of the blood of an immunized animal. It contains no bacteria, living or killed, or any immediate products of bacterial growth. It conveys the antibodies resulting from the contest between the animal furnishing it, and the bacteria or bacterial products (antigens) used to immunize that animal.

Vaccine therapy is a method of producing an active immunity by the injection of bacteria or their products directly into the patient. It gives immunity at first hand, as distinguished from serum therapy, which gives it at second hand. The active agent in vaccine therapy is the *bacterial vaccine*, which is actually a suspension of bacteria in water or in normal salt solution. All the bacterial vaccines in general use consist of bacteria killed by heat, and almost without exception a disinfectant is added to the suspension of killed bacteria to serve as a preservative. Bacterial vaccines contain no blood-serum; in fact, the standard vaccines contain no animal substance whatever. Accordingly, it will be seen that they differ from the therapeutic serums in the most substantial particulars. They are thin watery mixtures, more or less cloudy, according to the number of included killed bacteria, which usually can readily be identified by microscopic examination, in contrast to the thicker, sticky, generally clear serum, with its "horsey" odor, in which no bacteria are contained. In fact, the differences are so obvious, and the properties of these two classes of biologic remedies are so much at variance, that it seems a reproach to the general intelligence of our profession that physicians should still persist in calling all therapeutic immunizing agents "serums."

PREPARATION OF BACTERIAL VACCINES

While a physician who uses bacterial vaccines need not make them himself, he should at least know how they are prepared.

* This series of articles has been prepared under the direction of a committee appointed for the purpose by the Council on Pharmacy and Chemistry of the American Medical Association. The committee consists of Drs. Ludvig Hektoen, Chicago; David L. Edsall, Boston; John Howland, Baltimore; Reid Hunt, Washington, D. C., and Albert P. Ohlmacher, Detroit.

Pure Cultures.—With few exceptions, the starting-point of a bacterial vaccine is a pure culture of the particular species of bacterium whose vaccine is desired. This means that one who prepares a vaccine should be able to identify the various species of bacteria, and further that he should be able to assure himself of the purity of his culture; that is, of the absence of other species of bacteria aside from the one desired.

When the bacterial species is a common and well-known one, and especially when this species occurs in pure culture in the pus or other diseased material, the vaccine maker has a comparatively easy task. For instance, pus from an ordinary boil, as a rule, yields *Staphylococcus aureus* in unmixed culture, and the germs grow readily on ordinary culture mediums like agar; but the pus from a specific urethritis yields the gonococcus much more grudgingly, both because the gonococcus requires a special medium (serum or ascitic agar), and because it is almost always mixed in the pus with other bacteria; the other species usually multiply more rapidly and tend to hinder the growth of the gonococcus. In the case of influenza and whooping-cough, the isolation of the influenza bacillus of Pfeiffer, or of the pertussis bacillus of Bordet-Gengou from the muco purulent secretion of the respiratory passages is a task which often overtaxes the bacteriologist, for these species grow scantily, even on blood-agar, and are intimately mixed with a variety of other bacteria.

Separation of Colonies.—In order to obtain a pure culture from pus or other substance containing several bacteria, it is necessary to spread the material or a dilution of it over the surface of some solid medium, like agar, so thinly that the individual bacteria will grow in separate colonies. These colonies have characteristic modes of growth by which they can be recognized, or they may be identified by a microscopic examination. The members of a colony are with rare exceptions all individuals of the same species. Colonies of the desired species are transferred to a suitable medium in which they produce an abundant growth of a pure culture. The purity of the culture can be determined at any time by planting it on a suitable solid medium and observing whether bacteria of any other species than that desired grow on the medium.

BACTERIAL SUSPENSION

Once the problem of a pure culture has been solved, the next step in preparing a vaccine is to secure a sufficient growth, or in other words, to have the bacteria multiply to the requisite degree to furnish the basis of a vaccine. Solid culture-mediums are almost exclusively used for growing bacteria for vaccines. The rate of growth depends on the kind of medium and on the particular growth-rate of a given species. Staphylococci and colon and typhoid bacilli grow rapidly on ordinary mediums; but streptococci, pneumococci, gonococci and meningococci grow slowly or not at all on ordinary nutrient agar, and require special mediums like solidified serum or serum-agar (Loeffler's medium) for the production of a sufficient culture. Once having attained the optimum of its growth, usually after twenty-four or forty-eight hours in the incubator at blood heat, a culture should be converted into vaccine. With sterile saline solution as a menstruum, the culture is washed or scraped from the surface of its medium, and this rough emulsion or suspension is transferred to a proper receptacle and subjected to shaking sufficient to break up bacterial masses and to make a smooth mixture. Sometimes it is necessary to filter the suspension through cotton or coarse filter-paper, or to centrifuge it to precipitate or get rid of the coarser masses of bacteria. A uniform suspension having been made, the mixture of bacteria is ready for the further step—sterilization.

Sterilizing the Vaccine.—Heating the bacterial suspension in a water-bath to a temperature of 60 C. (140 F.), maintained from fifteen minutes to one hour, generally suffices to kill the bacteria. If the receptacle of the suspension is a bulb hermetically sealed, it is bodily introduced into the water; but if a flask or vial is used as container to which the final suspension is transferred, care must be exercised to avoid contamination of its sides, neck or stopper with bacteria which, not being immersed, do not receive sufficient heat to sterilize them. To test the sterility of the suspension, a portion of it is transplanted to proper mediums to see if any growth will occur. If no growth occurs the vaccine is sterile.

Objection to Heat-Killed Vaccines.—Sterilization by heat was adopted by Wright in the preparation of vaccines. Objections have been raised on the ground that the protoplasmic changes which attend the thermal death-point of bacteria are accompanied with chemical alterations of such character as to minimize or destroy the original immunizing value of the bacteria. To escape the supposed faults in heat-killed vaccines, some authorities have advocated *chemical sterilization* by the agency of phenol or cresol solutions. There is not sufficient evidence, however, to justify the general adoption of this method. It is more dangerous since it places dependence on only one means of devitalizing. Moreover, the vaccines are as a rule more irritating in their local reactions, and no more effective therapeutically.

STANDARDIZING

The method devised by Wright for setting a standard for bacterial vaccines, the actual counting of the bacteria, has been generally adopted.

The enumeration of the bacteria in a bacterial suspension is performed by comparing the number of bacteria with the red cell count of human blood in which, of course, the number per unit volume (cubic millimeter, for instance) is established within limits sufficiently accurate for practical purposes. The number of bacteria per cubic centimeter is estimated by mixing equal volumes of defibrinated blood and of bacterial suspension, diluting about five times, and smearing on a slide. The smear is stained with a Romanowski stain, and the number of red corpuscles and also that of the bacteria in the same volume of mixture are computed.

Since the number of corpuscles in human blood is about 5 million per cubic millimeter, by a comparison of the number of the bacteria with the number of corpuscles in the average of a number of fields examined, the number of bacteria per cubic millimeter in the original mixture can readily be estimated. From this the number per cubic centimeter can easily be calculated. The original suspension can then be diluted so that the vaccine ready for use will contain 1,000 million or 100 million per cubic centimeter, or whatever number is selected as the standard.

In application this method is little if at all more difficult than the performance of an ordinary blood-count for red cells or leukocytes. Any physician who can make a blood-count can standardize a bacterial suspension.

Instead of standardizing vaccines by number of bacteria per cubic centimeter, it has been proposed to use the density of the liquid or the weight of the dried bac-

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terial residue as standards. These, however, have not yet come into use.

Dilution of Vaccine.—A bacterial suspension, properly sterilized and standardized, must be diluted to a point at which a certain dose of bacteria is contained in a convenient quantity of fluid. The original suspensions, particularly of rapidly growing species, are too concentrated for convenience, although most manufacturers keep their stock in these concentrated suspensions. Commercial vaccines as now offered for sale are generally diluted so that a single average dose is present in a syringe or other container. But when a physician prepares his own vaccines it is desirable to carry the dilution only to a degree sufficient to give in a cubic centimeter a maximum dose of that particular bacterial species, fractions of which can be taken for reduced dosage. A concentrated suspension from a single culture-tube of slanted agar amounting to 5 or 10 c.c. in original bulk, should be diluted to 25, 50 or 100 c.c., depending on the number of bacteria contained in the original suspension, and the maximum number desired in a cubic centimeter of the finished vaccine. The diluent commonly employed is sterilized saline solution.

Chemical Preservative.—Almost without exception, workers with vaccines of killed bacteria add some germicide to guard against subsequent contamination of the diluted product or the concentrated suspension, as the case may be. Liquor cresolis compositus, originally advised by Wright, has been generally abandoned, because the soapy content of this mixture causes objectionable precipitation. It also seems that the potency of a vaccine is lost readily in the presence of this germicide. In the United States most private workers and most manufacturers have at present adopted cresol as the preservative of choice, adding it to the diluting saline solution in such a proportion as to yield from 0.2 to 0.4 per cent.

Objection to the addition of a germicide has been raised on the ground that its presence in a vaccine tends to hasten chemical changes in the contained bacteria, thereby interfering with their best immunizing properties. At least one company which recently entered the field of commercial vaccines has made a point of the fact that its vaccines are diluted solely with sterile saline solution and marketed in this untreated condition. It is highly probable that this objection to a preservative like cresol is fanciful; and there are good reasons for its retention, as it gives added security against contamination during manufacture, during storage or during the administration of a bacterial vaccine. The same objection has repeatedly been urged against the use of these germicides in therapeutic serums; but prolonged experience has conclusively shown that no appreciable loss of therapeutic potency occurs in a serum thus treated.

(To be continued)

Necessity of Reporting Cases of Disease.—The health department in a community is able to control disease in proportion to the completeness and exactness of its knowledge of the occurrence of cases. With full information of existing cases it can work effectively; it can direct its efforts at prophylaxis against the disease itself; it can work in the light of knowledge of the situation. Without such information its attempts at control must be of a general nature, sometimes effective, more often not, for it is working in the darkness of ignorance of the location and prevalence of that which it is attempting to control—as well hunt birds by shooting into every green bush, a practice that would cost much in ammunition and yield poor results.—*Ohio State Board of Health Bulletin.*

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

CHOLERA AGGLUTINATING SERUM.

H. K. Mulford Co., Philadelphia.

Cholera Agglutinating Serum.—The dried-blood serum of horses which has been injected with killed cultures of the cholera vibrio. It is intended for the diagnosis of cholera by the agglutination of suspected cholera vibrios.

For use the serum is dissolved in salt solution so as to make a definite dilution, commonly 1 to 100. A drop of this is mixed with the suspected culture and the mixture is observed under the microscope for evidences of agglutination.

BACILLUS DIPHTHERIÆ VACCINE.—This is claimed to be useful for the treatment of diphtheria carriers and for immunization against diphtheria.

H. K. Mulford Co., Philadelphia.

Diphtheria Bacterin.—It consists of killed diphtheria bacilli suspended in normal salt solution, properly standardized and prepared for administration. It is marketed in 4 glass syringes: Syringe A containing 100 million killed bacteria; B, 200 million; C, 400 million and D, 800 million. Also in packages of 6 one-C.c. ampules, each C.c. containing 100 million killed bacteria. Also in 20 C.c. vials, each C.c. containing 100 million killed bacteria.

BACILLUS COLI VACCINE (See N. N. R., 1913, p. 221).

Lederle Antitoxin Laboratories, New York City. (Schieffelin and Co., New York.)

Coli Vaccine (Polyvalent).—Marketed in 1 Cc. vials and in syringes containing respectively 50 million, 100 million, 200 million and 400 million killed bacteria.

GONOCOCCUS VACCINE (See N. N. R., 1913, p. 223).

Lederle Antitoxin Laboratories, New York City. (Schieffelin and Co., New York.)

Gonococcus Vaccine (Polyvalent).—Marketed in 1 Cc. vials and in syringes containing respectively 50 million, 100 million, 200 million and 400 million killed gonococci.

PNEUMOCOCCUS VACCINE (See N. N. R., 1913, p. 224).

Lederle Antitoxin Laboratories, New York City. (Schieffelin and Co., New York.)

Pneumococcus Vaccine (Polyvalent).—Marketed in vials and in syringes containing respectively 50 million, 100 million, 200 million and 400 million killed pneumococci.

STAPHYLOCOCCUS VACCINES (See N. N. R., 1913, p. 225).

Lederle Antitoxin Laboratories, New York City. (Schieffelin and Co., New York.)

Staphylococcus Vaccine (Polyvalent).—Marketed in vials and in syringes containing respectively 250 million, 500 million, 1 billion and 2 billion killed staphylococci.

Staphylococcus Albus Vaccine (Polyvalent).—Marketed in vials and in syringes containing respectively 250 million, 500 million, 1 billion and 2 billion killed bacteria.

Staphylococcus Aureus Vaccine (Polyvalent).—Marketed in vials and in syringes containing respectively 250 million, 500 million, 1 billion and 2 billion killed bacteria.

H. K. Mulford Co., Philadelphia.

Staphylococcic Cultures.—These cultures consist of colonies of active living staphylococcus aureus. They are intended for the elimination of diphtheria bacilli from the throats of diphtheria carriers. These cultures are marketed in sealed glass tubes, six tubes to the package, each tube containing an applicator in the form of a swab charged with a culture of active staphylococcus aureus.

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SATURDAY, MAY 10, 1913

EFFICIENT PASTEURIZATION AND THE BACTERIA WHICH MAY SURVIVE IT

It has been demonstrated both experimentally and commercially that practically no pathogenic bacteria survive a temperature of from 60 to 65 C. (140 to 149 F.) continued for thirty minutes or longer. Yet the most efficient pasteurization will not destroy all the organisms in milk, and the growth of the survivors markedly affects the quality of the milk. Ayres and Johnson[1] have recently published the results of an extended study of the effects on milk of the organisms which survive pasteurization. Data were collected from 219 pasteurizing plants in cities of over 25,000 as to the methods and temperatures employed. It was found that seventy-five plants were using the holding process with an average temperature of 62.8 C. (145 F.), and 144 plants were using the "flash" process, heating the milk to an average temperature of 71 C. (159.8 F.) and quickly cooling it again. In the plants using the holding process the temperatures ranged from 54.4 to 76.7 C. (130 to 170 F.), and in the "flash" process from 60 to 82.2 C. (140 to 180 F.). This lack of uniformity emphasizes the need for enforced standard regulations among all pasteurizing plants.

The regulations of some boards of health requiring a 99 per cent. reduction of the bacterial count in commercial pasteurization are of doubtful value. It is easy to secure such a percentage reduction in milk having a high bacterial count, while it is often impossible with a good grade of milk, for instance, milk having a bacterial count of 100,000 or less. A sample of milk containing 16,800,000 bacteria per cubic centimeter heated for thirty minutes at a temperature of 62.8 C. (145 F.) under conditions which admitted of no reinfection showed a count of 85,000, a reduction of 99.5 per cent.; while a sample having a count of 119,000 under the same conditions gave a count of 20,800 after heating, or a reduction of only 82.5 per cent. This sample would have failed to meet a required percentage reduction, yet obviously it was far superior to the first sample both before and after pasteurization. The percentage reduction is no criterion of the quality of the milk or the efficiency of the process.

A sudden cooling of the milk following the heating is regarded by many as essential to the efficiency of the process, and it is thought to aid in the destruction of the bacteria. Bacterial counts of the milk both before and after sudden cooling following the heating process showed practically no difference in the number of live organisms. Immediate cooling of the milk is desirable not because it kills any organisms, but because it hinders the multiplication of those which have survived the heating process.

A study of the organisms which survive pasteurization showed that those of the acid-forming group, which produce the normal souring of milk, predominated when a temperature below 76.6 C. (170 F.) was used in the process. When a higher temperature was employed, the acid-formers were largely destroyed and the surviving bacteria were of the peptonizing or protein-splitting group. Some gas-forming organisms which gave the preliminary tests for the organisms of the colon group were often found. These, unless identified carefully, would lead to the conclusion either that the process was not efficient or that reinfection had occurred after pasteurization.

It is evident that in all commercial pasteurizing plants definite regulations governing the process should be enforced; that these should be uniform throughout the country; that the tests for efficiency should be based not on a percentage reduction of the number of bacteria, but on the actual bacterial content of the milk, and that the effects produced by the growth of the surviving bacteria on the milk should be given consideration in formulating the regulations.

1. Ayres and Johnson: Bureau of Animal Industry, 1913, Bulletin 161.

NEW OBSERVATIONS ON THE DEVELOPMENT OF THE RASH IN MEASLES

Skin rashes, their cause and the reason of their frequently definite order of distribution over the surface in contagious diseases have long been the subject of much thought and investigation. A valuable study of the complete evolution of the rash in measles has recently been published by von Pirquet,[1] and it may be of interest to call further attention to the principal results of his observations because of the deductions drawn in regard to the nature of the eruption.

The first lesions usually consist of a few scattered papules, most frequently just behind the ears, but sometimes in the middle of the upper portion of the back, or about the mouth and nose, on the cheeks, or in front of the ears and on the forehead, but rarely on the thorax or abdomen. New regions are invaded in this order: At the end of the first day the rash frequently covers the scalp and the back down to the iliac crests, and

1. Von Pirquet, C.: Das Bild der Masern auf der äusseren Haut, Ztschr. f. Kinderh., 1913, vi, 1; abstr. in THE JOURNAL, April 26, p. 1337.

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the upper and middle portions of the face; sparsely scattered papules are sometimes found on the chest, the abdomen, the shoulders and the inner sides of the upper arms; solitary lesions occasionally occur on other parts of the arms, the thighs, the buttocks and the anterior surfaces of the lower legs; the knees and elbows are not involved. At the end of forty-eight hours the rash in many cases has reached its height; in general, the head, the trunk, the shoulders and the anterior portions of the upper arms and thighs are markedly affected; less constant and intense is the rash on the dorsal surface of the upper arms, the forearms and the dorsal surfaces of the thighs; scattered lesions are found in the popliteal spaces, over the lower legs, the hands and sometimes the feet; the elbows remain free. During the fourth and fifth days the rash invariably is completely developed. Not infrequently the skin of the buttocks, elbows, feet and hands escapes.

The rash spreads then from one portion of the skin to others in a fairly definite order, in general involving first the head and back, next the entire trunk and finally the extremities. The individual spots begin as minute, discrete elevations, surrounded by a narrow anemic zone, which enlarge in all directions and tend to become confluent. From the first sign of the papule to the complete passing of its hyperemia three days usually elapse. It is characteristic of the lesions appearing last (buttocks, feet, etc.) to disappear more rapidly. The rash develops more rapidly in summer than in winter; in younger children the skin is more often incompletely covered than in older children. The skin lesions in members of the same family frequently run a similar course. Children infected from the same source of contagium also present rashes of a similar type.

Local irritation has a tendency to hasten the breaking out over the irritated areas, and areas of chronic hyperemia also develop the rash earlier. Patients afflicted with urticaria or erythema multiforme develop the measles earlier in the places so diseased, the rash appearing subsequently on the head and trunk. Thus, the normal order of development may be reversed. Cutaneous irritants and local stasis applied not less than twenty-four hours before the rash sometimes influence its subsequent development, stasis producing a delay; but later the development is more profuse, while a mustard plaster placed where lesions otherwise are sparse produces a confluent exanthematous patch.

From these results von Pirquet concludes that the order of development and spreading of the rash depends on the vascularity of the areas involved, as the rash appears earlier and is more intense over areas having an abundant blood-supply and lying in close proximity to the larger blood-vessels. On this basis a hypothesis is formulated to the effect that the rash is the result of a "reaction with the measles organism or virus which takes place in the capillaries of the skin." This reaction, it is further assumed, may be at least in part one of agglutination of the measles organism by the action of its antibodies; these antibodies, being present in the blood, are of necessity more abundant in those portions of the skin possessed of better blood-supply, such areas being, so to speak, saturated with them. Indeed, this saturation may be so great that most of the virus is removed by a process of agglutination from the blood at these places, and only a few organisms are left to be taken up by the more distant or poorly vascularized areas. While the final test of the correctness of von Pirquet's conclusions must await the discovery of the causative agent of measles, the explanation advanced appears to be in harmony with the facts observed as well as with the modern view that many of the changes in structure and function in infectious diseases are allergic phenomena; that is, due to the products of the reactions between the antisubstances in the patient's body and the proteins of the invading microbes. Viewed in this light the rash in measles appears more intelligible to us, and von Pirquet's work illustrates again the value and interest of what one may call simple but careful and thorough clinical observations when guided and interpreted in the light of a reasonable and fruitful hypothesis.

COMPENSATION FOR OCCUPATIONAL DISEASES

The present federal law known as the workmen's compensation act of May 30, 1908, is the pioneer compensation law in this country. Fifteen states during the past two years have recognized the wisdom and justice of the compensation principle in dealing with the victims of industrial accidents and have enacted laws which are much more liberal and better serve the purpose than the original law enacted by Congress. The federal law applies to only about 350,000 civilian employees, and grants no relief for incapacity lasting less than fifteen days. It makes no provision for medical treatment, and one year's wage is the maximum benefit even for total blindness or death.

A bill has been introduced into Congress to extend the compensation act to the injuries caused by occupational diseases as distinguished from injuries by accident. The inadequacy of the present compensation act has been recognized, and the solicitor of the Department of Commerce and Labor in his last report recommended that a new law be enacted embodying compensation for occupational diseases as well as for accidents. The necessity for this law is shown by John B. Andrews,[1] secretary of the American Association for Labor Legislation, by examples taken from the government records; gross injustice is worked to some government employees who are incapacitated by conditions surrounding their work, under the seemingly somewhat inconsistent interpretations of the compensation act in a number of cases that appear to be similar. Compensation is granted in some instances, but in others equally or more deserving,

1. Andrews, John B.: The Survey, April 5, 1913.

it would seem, relief is denied. For instance, in a case of lead-poisoning in a workman engaged in scaling paint from the inside of battle-ships, to which we have heretofore referred,[2] compensation was refused on the ground that the injury complained of was not accidental but was a necessary or accompanying incident of the work. In another case a workman was employed in placing floor-plates in the engine-room of a warship while red and white lead was being applied in the bilges of the vessel; the fumes caused toxic amblyopia in the man laying the floor-plates, and the injury was ascribed by the United States solicitor to accident, because the claimant's particular work had nothing to do with the painting operations going on about him. Other examples are given by Andrews in which the refusal of relief hinged on differences quite as narrow, due, it is said, to the unfortunate legislative restrictions.

The first official report on the operation of the federal compensation law has recently been published and contains sixty-six closely printed pages devoted to embarrassing questions similar to the foregoing which have arisen because of claims arising out of occupational diseases. The recommendation that a new law be enacted which shall include compensation on account of occupational diseases arising in the government service is undoubtedly a step in which an enlightened government should again lead the way. No doubt at a later time it will be incorporated in the compensation laws of the various states.

A STRIKING EXPERIMENT IN SIMPLIFIED NUTRITION

Only those who have served an apprenticeship in experimental work and realize its pitfalls and technical difficulties can appreciate in its fullest significance the recent demonstrations by Professor Abderhalden of Halle regarding the synthetic powers of the animal organism.[1] We have repeatedly pointed out how essential complete digestion is as a preliminary stage in the utilization of our nutrients. The converse of this lies in the proof that the animal body is capable of constructing from the simple digestion fragments all the complexes which are necessary for the maintenance and proper functioning of the individual. On a small scale and over comparatively short periods of time this proof has repeatedly been furnished. A diet which has been shown to suffice for preserving nutritive equilibrium in some of the laboratory animals consisted of isolated amino-acids, representing the proteins; fatty acids and glycerol, representing the fats; simple sugars and inorganic salts. There is always room for criticism, in such experiments, on the ground that the periods of observation are too short. We are reminded of the efficient reserve forces and nutrient depots which may be requisitioned in times of need. Fasts of more than one hundred days have been recorded in the literature of nutrition, and forty-day fasts by the so-called hunger-artists have been common for "exhibition" purposes.

Abderhalden has now outdone all of this by successfully feeding an animal more than a quarter of a year on completely digested meat. Besides the salts present, the product ingested contained only amino-acids, together with small quantities of creatin and creatinin, sugar and fat. This phenomenal experimental feat was attended with a very considerable gain in body weight rather than signs of sacrifice of stored tissue substance. An ingenious turn was given to the demonstration of the power of the organism to synthesize protein by furnishing visible evidence. At the beginning of the experiment the dog was clipped, yielding 76 gm. of hair, which is largely protein in its make-up. At the end of three months of unique nutrition, interrupted by the exhaustion of the special food-supply rather than because of experimental failure, a complete new coat of hair had grown. No more striking exhibition of organic synthesis could be asked for.

The obvious extension of these experiments in simplified nutrition lies in ascertaining what amino-acids, if any, are absolutely indispensable. A beginning already made in this direction points to tryptophan and tyrosin as belonging to this category. Wherein their superiority and apparent nutrient importance lie must await future investigation. The way has been paved to new vistas in the domain of nutrition.

THE INSANITARY LABOR-CAMP

Labor-camps are constantly being formed throughout the United States wherever great engineering and structural works are under way. Because these camps are controlled by no laws, and because they are not supervised by any state department, they are a grave menace to the health of the laborers occupying them and the inhabitants of distant as well as adjacent towns. A consideration of labor-camp conditions in the Empire State may be informing and useful with relation to like communities throughout the union.[1]

There are 3,300 labor camps in New York state; 1,300 of them along the aqueduct now being built to convey water to the metropolis, 100 along the line of the state barge canal, 300 along the network of new highways, and 800 along railway lines, while 700 are scattered wherever bricks are baked, marble and slate quarried, fruit and vegetables canned and ore mined. Two thousand of these camps have been characterized as "plague spots." The total population of the camps is from 50,000 to 100,000 workers, practically all immigrants — in the main Italians, Poles and Armenians. The shacks which compose the camps are for the most part dilapi-

2. Lead-Poisoning in Battle-Ships, editorial, THE JOURNAL A. M. A., Aug. 3, 1912, p. 375.

1. Abderhalden, E.: Weitere Versuche über die synthetischen Fähigkeiten des Organismus des Hundes, Ztschr. f. physiol. Chem., 1913, lxxxiii, 444; also Synthese der Zellbausteine in Pflanze und Tier, Berlin, 1912.

1. See Kingsley, R., in New York Times, March 23, 1913.

dated shanties, not rain-proof; pure water for drinking and cooking is not always available in them, and the arrangements for disposing of human excreta are most imperfect.

The 300 road-making camps are perhaps most dangerous, for their locations are changed frequently, and the health of one community after another is placed in jeopardy. The conditions correspond to those which actuated the Indian to remove his tepee — when the ground about it had become intolerable by reason of the deposits of excreta and cooking refuse the Indian moved it to a new place. Should the immigrant laborer and his family be suffering from any infection, or should they be bacteria carriers, the danger of the road-camps is correspondingly greater than that of the fixed camps.

The danger is not imaginary. During the last seven years at least one epidemic a year in New York State has been traced to insanitary foreign labor-camps and settlements. For an instructive example: In February, 1908, the previously healthy city of Peekskill had 150 cases of typhoid with twenty-eight deaths, all within a fortnight. Trained investigators of the State Health Department tramped over every foot of the Peekskill watershed. On the banks of a small mountain stream flowing indirectly into the Peekskill water-supply a labor-camp was found. Because the contractor had failed to equip the camp with adequate and inexpensive health facilities, the camp waste had infected the brook, the water in which had in turn infected the Peekskill supply.

The New York City Board of Water-Supply has compelled exemplary conditions within its jurisdiction; it has forced the contractors now building the aqueduct to have their 20,000 foreign laborers in scientifically and sanitarily constructed labor-camps. These have to be located on dry, sandy soil. Water for drinking and washing can be drawn only from wells drilled in rock and carefully cased in metal tubing. Food is carefully screened from flies. Waste is deposited in patent incinerators and burned or sterilized before it becomes stale. The sleeping-stretchers are of sanitary canvas laced to pipe-rail metal frames; the canvas strips are removed daily, disinfected in alkali solution, and scrubbed with stiff brushes.

To secure more humane and sanitary conditions in all its labor-camps the New York State Bureau of Industries and Immigration has drafted a measure which ought to become law, providing that:

1. Every labor-camp employer, on the establishment of each camp, shall notify the state commissioner of labor and furnish particulars.

2. If the state commissioner of labor finds the site insanitary he may order the camp's removal to a site approved by him.

3. Each camp-house shall be provided with sufficient cubic feet of air-space, board floors, windows, washing facilities, kitchen and health accommodations. Waste must be destroyed by fire and removed to a safe distance from buildings and from drinking-water.

4. The water-supply of each camp must be obtained from a source satisfactory to the labor commissioner.

THE MINNEAPOLIS SESSION

The American Medical Association will hold in Minneapolis its sixty-fourth annual session, which, according to the prospects, will be most successful. The scientific programs are attractive and provide valuable themes of discussion in all the branches of medical practice. A large number of pages in this issue of THE JOURNAL are devoted to giving these programs approximately in final form, although some names and titles may be added later.

The social side of the meeting is being well looked after, and opportunities for recreation will not be lacking. The description of social events and the plans for entertainment assure those who attend the session that an enjoyable time awaits both the members and their wives and daughters. The profession of Minneapolis, of St. Paul and of the whole state of Minnesota is well organized and fully appreciates its responsibility for making this meeting of the American Medical Association a splendid one in every way.

An unusual and propitious feature of the session is that the University of Minnesota is to be the hostess. This means that the scientific programs will be carried out not amid the distractions of a bustling city, but in a beautiful park, literally far from the madding crowd. The only events which will not be on the campus are the Opening Meeting, Tuesday morning, and the President's Reception and the Ball, Thursday night. It will even be unnecessary to leave the campus at noon, for the university is to serve luncheon to members, guests and exhibit attendants—a feature which will notably add to the comfort of the occasion. These happy arrangements will add greatly to comfort, and will contribute to the success of the scientific programs.

The annual meetings of the Association are a most delightful combination of professional profit and pleasure — a graduate course with the flavor of the old student-life. Physicians attend because the annual meeting affords a splendid opportunity for acquiring new ideas; for coming in touch with the big men in the profession of medicine; for conference on new and strange cases and old problems in new aspects; for looking up new books for study-tables and seeing the latest instruments and apparatus—in short, for getting abreast of the times. The meeting provides a change from regular work and thus is a distinct relaxation; many make a vacation trip following the week of the meeting. Everyone looks forward to the renewal of old acquaintances and finds his classmates, college chums and other associates, whose sympathies and activities lie along the same line of practice as his own.

The great Northwest has its hands outstretched in welcome. THE JOURNAL feels this hearty attitude plainly, and passes the welcome on to the profession of the country. Come to Minneapolis for the week of the meeting, and, if you can do so, plan to spend another week or two on the excursions. Come, expecting a pleasant and profitable session, and you will not be disappointed.

Current Comment

RAT-PROOF BUILDINGS

The recent elemental catastrophes—the cyclones in the middle West, and the floods in that vast region watered by the Ohio—have destroyed many hundreds of buildings. Here, out of misfortune much good should come. A timely appeal for the rat-proofing of dwellings and other buildings at present existing, under construction or in contemplation comes from the United States Public Health Service.[1] Those about to erect a new building or repair an old one, whether of frame, brick, rock, concrete or other construction, may learn from Dr. Simpson's paper what sanitary and economic benefits are to be derived from permanent rat-proofing; and measures to such ends should be demanded by prospective owners as a part of building contracts. The rat is far too prolific to be exterminated by such agencies as traps, poisons, lethal gases and the like; these may reduce the numbers of the rodents, but if there is food within reach, the surviving rats will have more to eat proportionally, and procreation will be stimulated the more. Rat extermination can be effective only by separating that creature from its provender. Dr. Simpson's paper appears to contain all necessary information to this end, so far as relates to buildings. Those already erected can be rat-proofed by the closure of all natural or accidental openings; by being remodeled with material impervious to rats; by the removal of structures which will give refuge to rats, and by the protection or removal of foods which rats will eat.

THE SOLICITUDE OF A PATENT-MEDICINE MAN

The Select Committee on Patent Medicines, at present in session in Great Britain, is throwing light into some of the cobwebbed corners of the nostrum business. Mr. John Lawson, the manager of an English "patent-medicine" house, Daisy, Ltd., was recently put on the witness stand by the committee. Daisy, Ltd., puts two headache powders on the market, "Daisy Headache Cure" and "Head Powders." The former consists wholly of acetanilid, of which there are five grains to the powder; the latter consists wholly of phenacetin, of which there are eight grains to the powder. In the course of Mr. Lawson's examination reference was made to that part of the United States Food and Drugs Act which requires that the presence of acetanilid or phenacetin shall be declared on the labels of "patent medicines" containing these dangerous drugs. Mr. Lawson testified that in his opinion it was "not desirable in the public interest that the presence of acetanilid and similar drugs should be declared on the labels of proprietary medicines." His reason was that "such decisions would show the public that acetanilid was the usual remedy for headache," with the result that persons of a saving turn of mind would be tempted to buy it by the ounce and do their own dispensing! Daisy, Ltd., is selling to an unsuspecting public five-grain powders of plain acetanilid as a "cure" for headache, to be "repeated in two hours if necessary," under the claim that these powders are "free from any injurious substances." And the company's manager entertains fears for the public's safety should it learn how to buy its acetanilid under the official name! The "patent-medicine" business is largely evil, usually dangerous and frequently vicious. Yet there are some things connected with it that excite the risibilities even if the smile evoked is a cynical one.

1. Simpson, F.: Rat-Proofing, Pub. Health Rep., April 11, 1913.

OMNE IGNOTUM PRO MAGNIFICO

The old saying, "the unknown is always awe-inspiring," describes a human weakness as old as the race. It is a frailty on which the shrewd exploiter of "patent medicines"—"ethical" or not—thrives. No physician bows in therapeutic worship before well-known official drugs, but when official drugs are put out under new names with their nomenclatorial identity submerged or lost, then we have another story. For the most ordinary medicaments if put out in trade-marked packages under a fancy name become endowed with therapeutic properties one would never dream of ascribing to them under their non-mysterious, official names. The salicylates are valuable drugs; their action is well known and their limitations are fairly well understood. But what a transformation when the salicylates are put out under proprietary names! Their therapeutic properties are limited only by the imaginative powers of those who sell them. For years, physicians have been prescribing sodium salicylate under the name Tongaline. Those who have done so, have prescribed a name, not a drug. They have learned nothing about the accurate prescribing of salicylates. Had they given the official drug during the same time, their experience might have been of great value to the science of therapeutics; as it is, it is so much wasted energy. We urge every physician who has the interest of scientific medicine at heart to read the two short articles in the Propaganda for Reform Department of this issue dealing with Tongaline and its imitations. Let it be borne in mind, however, that Tongaline is merely an example of the blight that nostrum exploitation throws over the science of medicine. Also, it is but one example of a type—a type that will exist so long as the medical profession will permit it, and no longer.

METHYL ALCOHOL AND THE BLOOD

In view of the wide-spread interest in the toxicity of wood alcohol and the growing appreciation of the unsuspected dangers which it harbors,[1] every new estab-

1. Wood Alcohol-Poison, editorial, THE JOURNAL A. M. A., April 19, 1913, p. 1231.

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lished fact in regard to the physiologic action of methyl alcohol deserves to be brought to notice. Despite the considerable literature now available on the subject,[2] very little has been disclosed respecting the relation of methyl alcohol to the blood. The toxic effect is made evident in this direction as well as in connection with other more striking phenomena. From experiments by Miura,[3] the blood-forming functions appear to be seriously affected by the poison. The production of anemia is a new finding in this connection; and the decrease in the circulating lymphocytes with simultaneous increase in certain other types of leukocytes points to an involvement of the hemopoietic system. The attendant albuminuria and urobilinuria are likewise not insignificant symptoms. Whether these pathologic phenomena are brought about by methyl alcohol itself or only by oxidative derivatives such as formaldehyd or formic acid is of secondary import here. Methyl alcohol introduced into the organism means physiologic trouble.

THE CLINICAL THERMOMETER AS A VEHICLE OF INFECTION

It behooves us, especially in little things, to bear in mind that the public is being educated in medical matters. The other day THE JOURNAL received a communication from a layman calling attention to the danger in connection with the ordinary fever thermometer, and criticizing physicians in general for their carelessness in its use. Here is one paragraph:

> So far as my observation goes, there are very few physicians who give any care whatever to the thorough sterilization of this instrument. Not long ago a physician of good repute and an excellent man was called to attend a member of my family. His method of using the clinical thermometer is the same as that used by the majority of doctors. He took the thermometer from its little metal case, called for a glass of water, rinsed the thermometer around in the water, and then reached for his pocket-handkerchief to wipe it off. About that time our own thermometer was supplied to him for use. Barring possibly the pocket-handkerchief, his method is not widely different from others.

This correspondent calls attention to the propaganda which medical men have waged against the common drinking-cup, the common towel, etc., and he thinks that a propaganda should be waged against physicians who are so careless with the clinical thermometer. While probably there are very few educated physicians who would do as this particular physician did—at least to the extent of wiping the thermometer with his handkerchief!—still it is to be regretted that not all of us are so careful as we ought to be. Simply dipping the thermometer into water and wiping it off, even with gauze or cotton, is not sufficient. This will not prevent the carrying of bacterial infection. The thermometer should be disinfected before and after use, or should be kept in disinfecting material all the time. For this formaldehyd has been suggested,[4] but it is a slowly acting germicide,[2] and is irritant to some persons.[5] Alcohol is probably as effective a disinfectant for the purpose as anything.[4] A number of methods for using alcohol in this way have been suggested, among others that of Force,[5] who uses as a thermometer case a common ignition tube of heavy glass, 1 cm. in diameter and 11 cm. in length. The end of the thermometer is thrust into a soft rubber cork, and the case is filled with 50 per cent. alcohol; thus the instrument is constantly bathed in alcohol. This method would seem to be practical. In any event, some efficient method should be adopted. If any of our readers have an ideal method, we shall be glad to hear of it.

2. Articles on Wood-Alcohol Poisoning, Queries and Minor Notes Department, THE JOURNAL A. M. A., April 19, 1913, p. 1247.
3. Miura, S.: Ueber die Einwirkung des Methylalkohols auf das zirkulierende Blut, Biochem. Ztschr., 1913, xlix, 144.
4. Beasley, Edward B.: The Clinical Thermometer as a Possible Disseminator of Some Communicable Diseases, THE JOURNAL A. M. A., Oct. 21, 1911, p. 1357. Gros, E. L.: An Antiseptic Thermometer Case, THE JOURNAL A. M. A., June 8, 1912, p. 1756.
2. Post, W. E., and Nicoll, H. K.: The Comparative Efficiency of Some Common Germicides, THE JOURNAL A. M. A., Nov. 5, 1910, p. 1635.
3. Morgan, W. E.: The Serpent's Tooth in Formaldehyd, THE JOURNAL A. M. A., Feb. 22, 1913, p. 590.
4. Harrington, Charles: The Germicidal Action of Alcohol, Boston Med. and Surg. Jour., May 21, 1903.
5. Force, J. N.: A Home-Made Antiseptic Thermometer Case, THE JOURNAL A. M. A., Sept. 7, 1912, p. 797.

Medical News

CALIFORNIA

New Officers.—Solano County Medical Society, at the Vallejo General Hospital: president, Dr. W. S. S. Young; secretary, Dr. A. V. Doran, both of Vallejo.

New Building for Polyclinic.—The San Francisco Polyclinic has broken ground for a new building near Jackson and Polk Streets, adjoining the Tuberculosis Clinic.

To Require Intern Year.—At a recent meeting of the medical board of Leland Stanford Junior University, it was voted that a fifth or hospital intern year be required, prior to granting the degree of M.D., this requirement to begin with the class entering in 1914.

FLORIDA

State Society to Meet.—The fortieth annual meeting of the Florida Medical Association will be held in Miami, May 16-18.

Jacksonville Medical Association.—At a meeting of Jacksonville physicians, April 10, a local association was formed, of which Dr. S. E. Sissons was elected temporary chairman and Dr. Martin H. Smith, temporary secretary.

State Board Will Pay for Death Certificates.—Dr. Joseph Y. Porter, secretary of the State Board of Health, is sending out a circular to the press and commercial organizations urging the importance of full reports on the vital statistics of the state. The board has arranged to pay 25 cents for every death reported in proper form on the blanks provided by the board for that purpose.

GEORGIA

New Member of State Board.—Dr. A. D. H. Little, Thomasville, has been appointed a member of the State Board of Health.

Public Health Course in College.—With the beginning of the next term of the Medical College of Georgia, Augusta, a course on instruction in public health will be given. A laboratory for the analysis of food and milk has already been installed and it is said that A. L. Haggarty, chief food inspector of the Board of Health of the state, will be the instructor. The college will confer degrees in public health on those who complete the course and pass the required examination.

IDAHO

New Officers.—South Idaho Medical Society at Boise, April 24: president, Dr. Ralph Falk; secretary, Dr. R. L. Glase, both of Boise.

Personal.—Dr. F. M. Cole, Caldwell, has been appointed physician for Canyon County.——Dr. O. B. Steely, Pocatello, has been appointed a member of the State Medical Board.——Dr. M. H. Tallmann, Boise, physician of Ada County, has resigned.

New Quarters for State Board.—The State Board of Health which has, up to the present time, maintained quarters in

the Folk building, Boise, is to have its offices on the third floor of the state capitol building, in the space known as the "art gallery."

ILLINOIS

Personal.—Dr. V. D. Crone, Canton, who recently underwent operation in Peoria, has recovered and resumed practice.——Dr. Warren E. Hillyer, Augusta, was operated on at the Marietta Phelps Hospital, Macomb, April 26.

Beard Inspects New Hospital Site.—The State Board of Administration, accompanied by a delegation of members of the legislature, visited Alton, April 28, to inspect the site of the new State Hospital for the Insane. It is proposed to erect buildings on the cottage plan.

New Officers.—Central Illinois District Medical Society, thirty-ninth annual meeting at Pana, April 29: president, Dr. C. M. Jack, Decatur; secretary, Dr. Walter Burgess, Pana. The semi-annual meeting will be held in Pana in October.——Macoupin County Medical Society at Staunton, April 29: president, Dr. Thomas Hall; secretary, Dr. Charles D. King (reelected), both of Gillespie.——Illinois State Hospital Medical Association at Peoria, April 24 and 25: president, Dr Eugen Cohn, Peoria State Hospital; secretary-treasurer, Dr. A. M. Foster, Anna State Hospital. The next meeting will be held at the Jacksonville State Hospital in July.

Chicago

New Officers.—Physicians' Club of Chicago, annual meeting, May 2: directors, Drs. J. B. Herrick, D. W. Graham and S. C. Stanton; secretary, Dr. A. N. Murray (reelected).

Personal.—Dr. Emery R. Hayhurst of the Sprague Memorial Institute has been selected by the Ohio State Board of Health to take charge of the Bureau of Occupational Diseases recently created.——Dr. Liston H. Montgomery was elected president of the Western Society of the Army of the Potomac at its twenty-fifth annual meeting, April 30.——Dr. P. J. Tischart is confined to his bed, the result of an injury while alighting from a street car several weeks ago.——Dr. Edson B. Fowler is confined to his bed, the result of stepping on a nail, April 28.

Higher Entrance Requirements.—At the annual meeting of the board of trustees of the University of Illinois, March 11, it was voted that for students entering in September, 1913, the requirements for admission to the College of Medicine (formerly the College of Physicians and Surgeons of Chicago) be raised to at least one year of collegiate work in addition to fifteen units of common and high school work, and that for students entering September, 1914, the minimum requirement further be increased to two years of collegiate work in some college or university of recognized standing.

Eligible List for County Hospital.—As the result of examination for positions on the attending staff of the county hospital, the following applicants have been certified as eligible: department of surgery, Drs. Allen B. Kanavel, E. Wyllys Andrews, Charles Davison, George F. Thompson, Harry M. Richter, Paul F. Morf, Frederick A. Besley, Charles J. Rowan, Laurence Ryan, William R. Cubbins, Kellogg Speed, Frederick G. Dyas, Dean D. Lewis, John A. Wolfer, George de Tarnowsky, Paul Oliver, Charles A. Parker, George N. Pratt, Frank E. Pierce, Nelson M. Perry, Victor L. Schrager, Floyd B. Riley, Charles F. Yerger, Alfred J. Willits, Roger T. Vaughan, Dallas B. Phemister, William Fuller and Ernest C. Riebel; department of pathology, Drs. E. R. Le Count, Harry G. Weller, Maximilian J. Herzog; department of ear, nose and throat, Drs. Stanton A. Friedberg, George W. Boot, Evanston, Joseph C. Beck, Robert Sonnenschein and Alfred Lewy; department of medicine, Drs. Joseph A. Capps, Charles S. Williamson, Theodore Ticken, Milton M. Portis, Ludwig M. Loeb, Joseph L. Miller, William J. Butler, Frederick Tice, Ernest E. Irons, Joseph M. Patton, Ellis K. Kerr, Oak Park, Leon Bloch, Roger T. Vaughan, Walter W. Hamburger, Wilber E. Post, Samuel R. Slaymaker and Karl K. Koessler.

INDIANA

Sanatorium News.—The Fort Wayne and Allen County Antituberculosis Society has selected a site on the County Farm for the establishment of a shack colony for tuberculosis, to accommodate about twenty patients.——The tuberculosis camp committee of the Associated Charities of Anderson has arranged to erect cottages on the pesthouse farm east of the city, for the benefit of tuberculosis patients during the summer months

Personal.—Dr. Eric A. Crull has been elected medical director of the Fort Wayne Antituberculosis Society.——Dr. Oscar S. Deitch, Indianapolis, who suffered a collapse as the result of exposure at the time of the flood, is reported to be convalescent.——Dr. Moses Thorner, Indianapolis, has been elected president of the Indiana Association of Columbia University Alumni.——Dr. H. H. Sutton, Aurora, has been appointed and Dr. J. S. Boyers, Decatur, reappointed, to membership on the State Board of Health.

IOWA

Sanatorium Burned.—Health Haven Sanitarium, Des Moines, was destroyed by fire, April 6. All of the patients were removed without casualty. The loss is about $7,000, partially covered by insurance.

Personal.—Dr. Charles E. Stewart, Iowa City, has resigned as postoffice inspector.——Dr. E. B. Fulliam, Muscatine, who has been seriously ill with pneumonia, is reported improving.——Dr. A. M. Pond, Dubuque, has been appointed district surgeon of the Illinois Central system, vice Dr. Allen G. Staples, deceased.——Dr. Murdoch Bannister, Des Moines, has retired from the State Board of Control to resume practice at Ottumwa.

Hospital News.—The German Evangelical Lutheran Churches of Iowa are planning to build a Deaconess Home and Hospital at Marshalltown to cost $75,000. A site for the home has already been purchased for $14,000.——St. Joseph's Mercy Hospital, Waverly, is to be enlarged this summer to about thirty-two rooms. The cost of the addition will be about $20,000.——The managers of the Florence Crittenton Home, Sioux City, have announced plans for the construction of a maternity hospital.——Drs. E. S. Heilman and T. J. Houlihan have arranged to build a two-story hospital in Ida Grove this summer, to accommodate twenty patients.

KANSAS

Camp to Remain.—The tuberculosis camp at North Topeka is to be allowed to remain where it is, pending definite arrangements for a permanent home.

Addition to Medical Staff.—Drs. H. S. Kickok, W. H. Carter, W. P. Greening, G. K. Purves and H. H. Taggart have been elected members of the staff of Wesley Hospital, Wichita.

Personal.—Dr. and Mrs. Virgil W. McCarty, Rosedale, sailed for Europe, April 26.——Dr. L. P. Warren, Wichita, has returned after a year abroad.——Drs. Archibald Jones and Martin Hagar have been reappointed members of the Wichita Board of Health.——Dr. A. B. Peters has been elected mayor of Mankato and Dr. J. Wesselowski, Jewell City, justice of the peace.——Dr. F. B. May, Hunnewell, is reported to be critically ill following an operation for appendicitis.

New Officers.—Seventh District Medical Society organized at Hutchinson, April 24: president, Dr. S. M. Colladay; secretary, Dr. W. F. Schoor, both of Hutchinson.——Marshall County Medical Society at Marysville, April 29: president, Dr. W. E. Ham, Beattie; secretary, Dr. Jennie L. E. Eddy, Marysville.——Brown County Medical Society at Hiawatha, April 8: president, Dr. H. J. Harker, Horton. A resolution was adopted that local newspapers be requested not to mention names of physicians in connection with any case.

MARYLAND

New Hospital.—Plans for the new Eastern Shore State Hospital, Cambridge, for the construction of which $200,000 was appropriated by the last legislature, have been selected and approved by a jury of which Dr. Hugh H. Young is chairman.

Baltimore

Social and Mental Disease Exhibit.—An exhibit of cases of social and mental diseases is being held by the Committee of Public Instruction of the Medical and Chirurgical Faculty of Maryland. The photographs and descriptive text relate to alcohol, tuberculosis, mental diseases, social diseases, infant mortality, etc.

New Addition to Hopkins Group.—Plans are being approved for the new James Buchanan Brady Urologic Clinic, made possible by a gift of $200,000 from Mr. Brady. The building is to be of brick, five stories in height and to adjoin the present surgical building with which it will be connected by a passageway. Mr. Brady has agreed to give $15,000 annually for maintenance and support.

Personal.—Dr. C. R. Davis was seriously injured, April 27, in a collision between his automobile and a street car.——

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Dr. J. F. Hogan has resigned from the staff of Mercy Hospital and will do special work at the Sydenham Municipal Infectious Disease Hospital.——Dr. Marshall L. Price, formerly secretary of the State Board of Health, has been adjudged insane and committed to the authorities of Baltimore County.

MICHIGAN

Luncheon to English Physician.—Dr. J. H. Kellogg, Battle Creek, gave a luncheon in honor of Dr. Eric Pearce Gould at the Battle Creek Sanatorium, April 29.

New Officers.—Benzie County Medical Society at Frankfort: president, Dr. C. P. Doyle, Frankfort; secretary-treasurer, Dr. E. J. C. Ellis, Benzonia.

Hospital Relieved from Taxation.—As the result of an appeal made by the officials of the Detroit General Hospital to the aldermen to exempt the hospital property from the $150,000 assessment levied against it, the Board of Review on April 28, voted to cancel the assessment.

Hospital Items.—The Board of Estimators Committee of the Board of Health and Poor Commission Funds of Detroit have under consideration plans for construction of an annex to St. Mary's Hospital to cost about $50,000 and to accommodate about one hundred additional patients.——Building operations have been commenced on the new hospital to be erected at the Huron County Farm.——The new Union Benevolent Association Hospital to be erected at the east end of Grand Rapids will consist of two buildings, five stories in height, constructed of brick and stone and to cost about $300,000. The hospital is the gift of John W. Blodgett. The old hospital at Lyon Street and College Avenue is to be sold.

MINNESOTA

New Officers.—Stearns-Benton County Medical Society at St. Cloud, April 17: president, Dr. G. E. Sherwood, Kimball; secretary-treasurer, Dr. J. C. Boehm, St. Cloud.

Memorial Meeting.—At the meeting of the Blue Earth County Medical Association held in Mankato, March 31, a portion of the evening was devoted to a memorial for the late Dr. A. O. Bjelland, which was read by Dr. Helen Hughes-Hielscher.

New Tuberculosis Hospital.—Work on the new St. Paul City Hospital for the treatment of tuberculosis patients, for which an appropriation of $75,000 has been made, began May 1. The hospital will receive both advanced and incipient cases and will accommodate eighty-four patients.

Medical Extension Lecturers.—Lectures in the medical extension course at the University of Minnesota were delivered, on April 22, by Dr. John B. Murphy, Chicago, on "The Need for an Efficient National Health Service in the United States from an Economic Standpoint," and on April 29, by Dr. Henry B. Favill, Chicago, on "The Growth of Hygienic Ideals."

Personal.—Dr. J. Frank Corbett, city bacteriologist of Minneapolis, has resigned to take effect July 1, in order that he may devote his entire time to experimental surgical work in Minnesota.——Dr. Troy S. Miller, Minneapolis, charged with having caused the death of a young woman by an operation, was acquitted, April 11.——Dr. D. C. Darrow has been elected president of the Moorhead Automobile Club.

Sanatorium Notes.—The Lake Shore Sanatorium at White Bear Lake will be ready in a few days to receive patients. The institution is under the medical supervision of Drs. Harry Cannon, Frank E. Balcome and T. J. Moynihan, St. Paul.——At the last meeting of the Ottertail County Commissioners an additional sum of $8,000 was appropriated toward the new county sanatorium to be erected on the shore of Ottertail Lake.——Blue Earth, Goodhue, Crow Wing, Marshall, Itaska and Polk counties have expressed a willingness to make substantial appropriations for tuberculosis sanatoriums.——Ramsey County has decided to take advantage of the county sanatorium law and secure assistance from the state in the building of a county sanatorium.

MISSISSIPPI

Medical College Property Sold.—The property of the Mississippi Medical College at Meridian, was sold at auction, recently, for $22,250.

New Officers.—Jefferson County Medical Society at Fayette: President, Dr. L. R. Harrison, Fayette; secretary-treasurer, Dr. S. R. Towns, Union Church.——Simpson County Medical Society at Mendenhall: president, Dr. J. N. Chandler; treasurer, Dr. A. C. Norman, both of Braxton.

Personal.—The office of Dr. C. W. Smith, Glendora, was burned April 19.——Dr. W. S. Sims, Jackson, has started for Europe.——The house of Dr. J. R. Sharman, Meridian, was destroyed by fire April 2.

Colored Physicians Meet.—The Colored Medical Association of Mississippi held its annual meeting in Jackson, April 23-24 and elected Dr. J. W. Sharrod, Meridian, president; Dr. J. C. Childress, Jackson, vice-president; Dr. L. R. Young, Hattiesburg, secretary, and Dr. D. W. Turner, Jackson, treasurer.

NEBRASKA

New Officers.—Nemaha County Medical Society at Auburn, April 16: president, Dr. B. F. Lorance; secretary, Dr. E. M. Tyler, both of Auburn.

State Medical Association Meeting.—The annual meeting of the Nebraska State Medical Association will be held in Omaha, May 13-15 with headquarters at the Rome Hotel.

Alumni Meeting.—At the annual meeting of the Alumni Association of the John A. Creighton Medical College, Omaha, April 24, Dr. M. J. Scott, Butte, Mont., was elected president; Dr. N. F. Steiner, Omaha, vice-president, and Dr. George A. Stevens, Omaha, secretary-treasurer.

Gift to College Library.—Dr. M. J. Scott, Butte, Mont., has donated $1,000 toward the endowment of the medical library in connection with the John A. Creighton Medical College, Omaha, and an additional sum of $200 annually for the maintenance fund.

Personal.—Dr. J. E. Summers has been reappointed chief surgeon of the Douglas County Hospital, Omaha.——Dr. Andrew Johnson, superintendent of the Norfolk State Hospital, has resigned.——The office of Dr. George P. Wilkinson, Omaha, was destroyed by fire April 13.——Dr. Caroline D. Piasecki, St. Paul, sailed for Europe, April 27.

County Secretaries' Meeting.—The meeting of the Association of County Secretaries and Officers of the State will be held May 12, at the Rome Hotel, Omaha. A general discussion will be conducted under the following heads: (1) "Should the fiscal year coincide with the calendar year; (2) should there be coordinate work between the county secretaries and the councillors of their respective districts."

NEW YORK

Tuberculosis Camp to Open.—The tuberculosis summer camp, Huntingtonville, is to be opened early this month. The camp has accommodation for twenty patients, who are housed two in a shack.

Typhoid in Albany.—Twenty new cases of typhoid were reported in Albany on April 29, bringing the number of cases thus far reported during the present epidemic up to 100. Two deaths have occurred. The spread of the disease is attributed to the recent inundation of the city's filtration plant.

Medical Women Elect Officers.—At the seventh annual meeting of the Women's Medical Society of the State of New York in Rochester, April 28, the following officers were elected: president, Dr. Marion Craig Potter, Rochester; vice-presidents, Drs Angenette Parry, Emily Dunning Barringer, New York City, and Evaline P. Ballintine, Rochester; secretary, Dr. Sarah Gardiner Pierson, Rochester, and treasurer, Dr. Edith R. Hatch, Buffalo. At the annual dinner Dr. Grace Peckham Murray, New York City, presided.

New York City

Greenpoint Hospital Begun.—The cornerstone of a new hospital at Kingsland Avenue and Bullion Street has been laid. The building is to cost $300,000 and will be six stories in height.

Small-Pox on Steamer.—Because of a case of small-pox on the Red Star steamer *Finland*, the 208 third-class passengers on the boat were placed in isolation on Hoffman Island until all danger of infection should be passed.

Valentine Will Approved.—Supreme Court Judge Clark, on April 24, approved the clause in the will of the late Dr. Ferdinand C. Valentine who gives the principal of the estate, on the death of the legatees mentioned, to the New York Academy of Medicine, the income to be used as an annual prize for the best research work in the field of genito-urinary diseases.

Personal.—It is announced that Dr. Hermann M. Biggs, New York City, has consented to accept Governor Sulzer's appoint-

ment as head of the reorganized State Health Department.——Dr. Myron D. Lipes, Cobleskill, is under treatment for septicemia at the Albany City Hospital.——Dr. John W. Poole, Brooklyn, is reported seriously ill with septicemia due to an operation wound.——Dr. J. Herbert Lawson sailed for Europe on May 3.

Police Surgeons Investigated.—An investigation of the surgical bureau of the police department has resulted in a report which finds many abuses and little to praise in the present system. It is claimed that the police surgeons receive too much money for too little work, that they have no regular office hours exclusively for policemen; that they are permitted to engage in outside practice and in many instances live outside of the districts in which they serve. The report states that there are no medical histories of the men; that there is no system of periodical physical examinations, and that the surgeons are not required to make sanitary inspection of the station houses.

A Further Safeguard for Sale of Milk.—The board of health proposes a set of rules which will bar many small dealers and grocers from selling milk. The regulations under consideration would permit the sale of milk only in stores approved by the department of health, and in places where other foodstuff are sold only in original packages. The use of a small room in which milk is stored is prohibited, nor shall any room be used which is unduly crowded. The floors, walls and ceilings of rooms in which milk is stored or sold must conform to certain requirements. Many dealers say that these regulations cannot be followed, but the health commissioner has thus far given no indication of what compromise might be accepted.

To Standardize the American Child.—The New York Milk Committee and leading experts from many states have joined in a nationwide examination of children in order through a series of competitive examinations to determine a standard for the normal healthy American child. Examinations for the first contest have been held in Lenox Hill House, a settlement house on East Seventy-Second Street. Prizes will be awarded not only to the best developed babies of different ages, but the baby that fails to get a prize but shows the greatest progress at the next examination will receive one. In addition to establishing standards for normal children of various ages and different races, the investigation will endeavor to show the results of intermarriage between the nationalities and the effects of systematized medical and social work in the quarters of the foreign population. Talks to mothers are given in connection with the contests. Different methods will be carried out in the various states, as for instance, in North Carolina; the contests will be under the direction of the Hookworm Commission and will be made a part of the campaign against that affection. In Massachusetts it will be carried out among the babies of factory workers by social workers; in Louisiana, Tennessee, Oklahoma, Montana, Missouri and Washington prizes of $1,000 will be given.

NEW JERSEY

New Officers.—Hunterdon County Medical Society at Flemington, April 22: president, Dr. F. A. Thomas; secretary, Dr. O. H. Sproul, both of Flemington.

Personal.—Dr. Charles S. Heritage, Glassboro, who has been in Hot Springs, Ark., under treatment for nephritis for a year, is making good progress toward recovery and expects to return to his practice early in May.——Dr. Alexander Marcy, Jr., Riverton, has been appointed a member of the consulting staff of the State Village of Epileptics, Skillman.——Dr. Richard P. Francis, Montclair, fractured his clavicle and sustained serious internal injuries in a collision between his automobile and another car, recently.

Hospital News.—The workers for the Orange Memorial and Orthopedic Hospitals who are endeavoring to raise $150,000 or more for these institutions, announce that up to April 17, $41,503 had been subscribed.——Princeton University is to have a new infirmary to cost $150,000. Plans have already been approved and $10,000 has already been subscribed. The infirmary will consist of a general hospital, a contagious disease building and a building for domestic service. The main building will be four stories in height and will contain four wards, a dispensary, chapel, etc.——The Camden County Board of Freeholders have authorized the purchase of the site for a county tuberculosis hospital at Ancona, a tract of land containing 83 acres and a building known as Dr. Snowden's Sanitarium, to cost $11,000. On this site will be built a county tuberculosis hospital to cost approximately $30,000.

NORTH CAROLINA

New Officers.—Fifth District Medical Society at Fayetteville, April 22: president, Dr. J. W. Halford, Chalybeate Springs; secretary, Dr. A. B. Croom, Maxton.

State Buys Land for Blind Institute.—The board of directors of the State Institute for the Blind have purchased a tract of ground, eighty acres in extent, near Raleigh, for a new home for the institution at a cost of $33,750.

Health Board Meetings.—The State Health Officers' Association will meet in Morehead City, June 16.——The State Board of Medical Examiners for Licensure of Physicians will meet in Morehead City, June 12.——The annual meeting of the State Board of Health will be held at Morehead City, June 18, during the session of the State Medical Society.

State Society to Meet as Originally Planned.—The annual session of the Medical Society of the State of North Carolina, originally planned to be held in Morehead City, June 17, and later changed to June 10 on account of the date conflicting with that of the meeting of the American Medical Association, has been again fixed at the original date and place, June 17. The headquarters will be at the Atlantic Hotel.

Portrait Presented.—The Medical Society of the State of North Carolina has presented to the state library an oil painting of the late Dr. Patrick Livingston Murphy, superintendent of the Western State Hospital, Morganton. Dr. J. Howell Way, Waynesville, presided, the presentation address was made by Dr. Richard H. Lewis, Raleigh, and the portrait was accepted on behalf of the state by Governor Locke Craig.

Personal.—Dr. J. W. Austin, High Point, announces his intention to limit his work to diseases of the eye, ear, nose and throat.——Dr. Henry T. Babnson, Winston-Salem, has been appointed a director of the new Home for the Widows of Confederate Soldiers.——Dr. William C. Steele, Mount Olive, is under treatment in St. Luke's Hospital, Richmond.——Dr. Charles S. Mangum, Chapel Hill, has been elected president of the Alumni Association of Jefferson Medical College.——Dr. Albert Anderson, Concord, has been elected superintendent of the State Hospital, Raleigh, vice Dr. L. J. Picot.

Cone Memorial Hospital.—The widow of the late Moses H. Cone, Greensboro, has conveyed in fee simple the bulk of the estate left by her husband, which amounts to about $2,000,000 to a board of trustees to build a hospital as a memorial to her husband. The deed of trust is irrevocable, but Mrs. Cone reserves the income from the estate during her lifetime. The deed embraces a site of sixty-seven acres in Greensboro, a large landed estate in Watauga County, cotton mill stocks, etc. Of the fifteen trustees, Mrs. Cone is to appoint eight, the governor three, and the Guilford County Board of Commissioners, the commissioners of the city of Greensboro, the Wautauga County Board of Commissioners and the Guilford County Medical Society, one each. Dr. John Wesley Long, Greensboro, has been elected by the Guilford County Medical Society.

PENNSYLVANIA

Personal.—Dr. George W. Widder, Harrisburg, was elected president and Dr. J. M. J. Raunick, reelected secretary of the Harrisburg Board of Health.——Dr. J. B. McAlister has been appointed a member of the Harrisburg Board of Health.——Dr. F. W. Coover, Harrisburg, and Dr. Marion Ulrich, Millersburg, will spend the summer in Europe.

State Physicians in Charge at Gettysburg.—During the celebration of the fiftieth anniversary of the battle of Gettysburg, July 2, 3 and 4, when 50,000 visitors are expected in that town, every safeguard for their safety will be taken by Dr. Samuel G. Dixon, State Health Commissioner, who has completed arrangements for an emergency hospital of 175 beds. The hospital tents will be under Dr. Dixon's personal supervision. The hospital will consist of thirty hospital tents with accommodations for sixteen doctors and eighteen nurses. It will have a commissary department and a fully equipped operating tent, with a consulting surgeon constantly on duty. There will be in addition two hospital cars, so serious cases may be transferred daily, if need be, to hospitals in nearby cities. In addition to the main hospital there will be two dispensaries with six beds, each dispensary with a nurse and physician in charge. One of these will be at the railroad station to care for visitors who may be ill on arrival and one near the great assembly tent where the meetings are to be held. In addition to these dispensaries there will be six emergency stations for first aid. There will be auto ambulance service to convey patients to the main hospital. The

regular water-supply of Gettysburg will be augmented by specially installed pumps. Flowing fountains will be installed about the city and grounds. All wells in Gettysburg and vicinity have been examined and those which are not safe will be closed.

Philadelphia

Gives Home to Charity.—Miss Mary Gibson, of Maybrooke, Wynnewood, has given the use of her home in Narberth for a summer holiday house for children. The place has been named "The King's Daughters' Holiday House," and will open about the middle of June. As this is early for school children, babies from convalescent wards of hospitals will have the first privileges of the home.

Personal.—Dr. Peter F. Moylan is critically ill and has been confined to his home for three weeks.——Dr. James Tyson, emeritus professor of medicine at the University of Pennsylvania, was the guest of honor at the annual banquet of the Northern Medical Association, April 30.——Dr. Wilmer Krusen was given a dinner at the St. James Hotel, April 30, by Dr. Frank C. Hammond.

New Hospital for Germantown.—A site for the new Providence General Hospital, planned to provide the western section of Germantown with an institution easy of access, has been selected at Wissahickon Avenue and Lincoln Drive. The plot includes 7 acres and was one of the properties procured from William Penn by the Rittenhouses. The hospital will be non-sectarian. On condition that $150,000 be raised, an offer of a substantial donation has been made.

Evans Museum Cornerstone Laid.—The cornerstone of the University of Pennsylvania's new building at Fortieth and Spruce streets, to be known as the Thomas W. Evans Museum and Dental Institute and School of Dentistry, was laid with appropriate ceremonies, May 3. The building is a memorial to Dr. Thomas W. Evans, an American dentist who died in Paris, Nov. 14, 1897. At his death it was found that he had left his entire estate valued at $3,000,000 for the present museum.

Changes in Hospitals.—Work has begun on the new $200,000 six-floor surgical wing of the University Hospital.——A decision has been reached in the competition for the Jewish Maternity Hospital to be built at Fourth and Spruce Streets to cost $50,000.——The medical and surgical departments of the hospitals of the Woman's Medical College of Pennsylvania were established in 1904. All departments of medical and surgical service for men, women and children are here conducted by the college faculty. This is the main branch of the hospitals; it immediately adjoins the college building.

More Fresh Air Schools.—During the past two years, three fresh air schools for delicate children have been established in various sections of the city. These are in session on the roof of the Lighthouse Social Center, 142 West Lehigh Avenue; the McCall School Annex at Sixth and Spruce and the Wilson School Annex at Twelfth and Federal. In the annual report of the Division of Medical Inspection of Public Schools, of which Dr. Walter S. Cornell is director, particular provision is made, not only for children suffering from malnutrition and other ailments, but also for the healthy pupils by a widespread introduction of fresh air classes in all schools.

WISCONSIN

New Officers.—Chippewa County Medical Society at Chippewa Falls, April 23: president, Dr. C. A. Hayes; secretary-treasurer, Dr. A. L. Beier, both of Chippewa Falls.

Isolation Hospitals Needed.—A statement has been sent by the secretary of the State Board of Health showing the need of isolation hospitals throughout the state for the care of patients suffering from communicable diseases.

Resolutions Regarding Dr. McCarty.—Dane County Medical Society at its April meeting adopted resolutions expressing the loss of the society sustained by the death of Dr. Thomas H. McCarty, Madison, and the sympathy of the society with the family.

Personal.—Dr. L. R. Sleyster has been elected mayor of Waupun.——Drs. F. C. Suiter and G. J. Egan have been reappointed surgeons for the La Crosse division of the C. M. and St. P. R. R.——Dr. G. E. Crosley, Milton Junction, has been appointed local surgeon for the C. M. and St. P. R. R.——Dr. A. G. Hough, Morrisonville, has started for Berlin.

GENERAL

Conference of Charities and Correction to Meet.—The fortieth annual session of the National Conference of Charities and Correction will be held in Seattle, Wash., July 5-7, under the auspices of the Seattle Central Council of Social Agencies.

Federation of Licensing Boards.—The Federation of Medical Examining and Licensing Boards of New England held its meeting in Boston, April 5, Dr. Gardiner T. Swarts, Providence, R. I., presiding. Dr. J. L. M. Willis, Eliot, Me., was elected chairman and Dr. Samuel H. Calderwood, Roxbury, Boston, secretary of the organization.

Central America no Longer a Menace.—Surgeon Joseph H. White, U. S. P. H. Service, on duty at New Orleans, who recently returned from an inspection of Central American ports and interior towns, expressed the opinion that nowhere in the territory visited was there anything which suggested danger to the public health of the United States.

Academy of Medicine Meeting.—The thirty-eighth annual meeting of the American Academy of Medicine will be held in the Leamington Hotel, Minneapolis, June 13-15, under the presidency of Dr. Ray Lyman Wilbur, San Francisco, the subject of whose address is "The Physician of the Future." The opening session of June 14 will be devoted to the discussion of the physical bases of crime.

Malarial Congress.—A malarial section of the National Drainage Congress was organized at the recent meeting in New Orleans. Dr. Oscar Dowling was elected president of the section, and Drs. C. C. Bass, New Orleans; Seale Harris, Mobile; Walter S. Leathers, University, Miss.; Morgan Smith, Little Rock, Ark.; R. H. von Esdorf, U. S. P. H. S., and W. A. Evans, Chicago, were made members of the executive committee.

Bequests and Donations.—The following bequests and donations have recently been announced:

St. Vincent's Hospital, New York City, $10,000 by the will of Katherine I. D. Harned.

Mount Sinai, Beth Israel, Presbyterian and St. Vincent's Hospital and Montefiore Home, New York City, each $5,000 by the will of Moses Weinman.

House of Rest for Consumptives, New York City, $100,000, to be designated the Amelia Sturges Morgan Memorial Fund, and Dr. James W. Markoe, New York City, an annuity of $25,000, by the will of John Pierpont Morgan.

Presbyterian Hospital, New York City, $15,000, and St. Vincent's Hospital, on the death of the testator's husband, $30,000, by the will of Mrs. Cornelia Eaton.

Harrisburg (Pa.) Hospital, $5,000 by the will of William H. Boyer, New York City.

Rockefeller Institute for Medical Research, $200,000, the income of which is to be used "to investigate into the causes and nature of cancer, and methods of its prevention and treatment," by the will of Henry Rutherford, Grand Isle, Vt.

Rockford (Ill.) Hospital, $60,000, for an addition to be known as Emerson Hall, donation by Mrs. Ralph Emerson.

American College of Surgeons.—At the Congress of American Physicians and Surgeons recently held in Washington, an organization was founded, similar to that of the Royal College of Surgeons of England. It is to be called the American College of Surgeons, will have its headquarters in Chicago and will grant to surgeons who meet its requirements the degree of Fellow of the American College of Surgeons, the recipients of which will have the right to use the initials F.A.C.S. in connection with their names. The officers elected are: president, Dr. John M. T. Finney, Baltimore; Drs. W. W. Chipman, Montreal, and Rudolph Matas, New Orleans, vice-presidents; Dr. Franklin H. Martin, Chicago, secretary; Dr. Albert J. Ochsner, Chicago, treasurer, and Drs. J. B. Murphy, Chicago; Edward Martin, Philadelphia; George E. Brewer, New York City; Charles A. Mayo, Rochester, Minn.; Harry M. Sherman, San Francisco; George W. Crile, Cleveland; William D. Haggard, Nashville; Charles F. Stokes, U. S. Navy; H. A. Bruce, Montreal; L. N. McKechnie, Vancouver, B. C., and Fred J. Cotton, Boston, regents. The first meeting of the organization will be held in Chicago in November next, when the president of the Royal College of Surgeons of England will be the guest of honor.

FOREIGN

Hygiea's Ten Year Index.—Our Swedish exchange, *Hygiea*, has recently published a collective index for the years 1899-1908, inclusive, which forms alone a volume of 280 pages. This monthly is the official organ of the Swedish Medical Association and, besides original articles and monographs in each number, contains the detailed reports of the proceedings at each of the weekly meetings of the society.

Other Deaths Abroad.—Beside those noted by our foreign correspondents, the following deaths are noted: Jordan Lloyd, M.Sc., M.D., F.R.C.S., Eng.; senior surgeon to the Queen's Hospital and professor of surgery in the University of Birmingham; died suddenly at his home in Edgbaston, April 4, from angina pectoris, aged 59. In the death of Mr. Lloyd, Birmingham

loses an eminent citizen and the university a bold, quick and ready surgeon and a most brilliant surgical teacher. He was president of the Birmingham Branch of the British Medical Association in 1903-4, delivered the address in surgery at the Birmingham meeting of the British Medical Association in 1911 and was editor of the *Birmingham Medical Review* from 1886 to 1888.——Sampson Gemmell, M.A., F.F.P.S., Glasgow, regius professor of medicine in Glasgow University and senior physician to Weston Infirmary; died at his home in Glasgow, April 1, from heart disease, aged 65. He excelled as a clinical teacher, his classes were large and his students enthusiastic. He had a great power of limiting the unessentials, and of getting down to the essential features of his subject.——Sir Henry Rosborough Swanzy, M.B., Dublin, 1865; surgeon to the Royal Victoria Eye and Ear Hospital, Dublin; eminent as an oculist and aurist, and author of standard text-books on his specialty; president of the Ophthalmologic Society of the United Kingdom from 1897-99; president of the Royal College of Surgeons in Ireland from 1906-08 and knighted in 1907; president of the ophthalmologic section of the International Medical Congress to meet in London in August; died at his home in Dublin, April 12, from influenza, aged 68.

CANADA

Donates Tuberculosis Hospital.—Mrs. Helen T. Jordan Boston, has given the government of New Brunswick a hospital for patients in the incipient stage of tuberculosis.

Small-Pox Holds Liner at Quarantine.—The Canadian Pacific steamship *Monteagle*, from the Orient, is held in quarantine at Williamshead, B. C., on account of a case of small-pox among the first-class passengers.

Personal.—Dr. W. J. Roche, Minnedosa, Minister of the Interior of Manitoba, who recently underwent a dangerous operation, is reported to be securely convalescent.——Dr. A. C. Sinclair, Vancouver, B. C., has been appointed superintendent of the Winnipeg General Hospital.

Canadian Public Health Association.—The third annual meeting of the Canadian Public Health Association will be held in Regina, Sask., September 18-20, under the presidency of Dr. John W. S. McCullough, Toronto. The provincial government has decided to bring all the medical health officers of the province, about two hundred in number, to the meeting.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 26, 1913.

Some Results of the National Insurance Act

The national insurance act has not been in operation long enough to permit a final judgment with regard to its working, but certain facts are coming to light. The fears which were at first entertained that physicians would be annoyed by unnecessary night calls and other unnecessary visits at the patients' houses have not been realized; but there have been many consultations at physicians' offices. This is partly due to the novelty of the scheme, many persons coming from mere curiosity. Some physicians appear to be doing very well as a result of the act, although they may have to work hard. They have on their lists as many as 3,000 insured persons, yielding an income of $5,000, and in addition carry on private practice. In one direction the insurance act has diminished medical work. While the number of inpatients at the hospitals remains about the same, the number of outpatients has been diminished one half. The reason is that insured persons will not be given hospital treatment unless this is of such a special nature that it cannot be given by the insurance doctors.

Death of a Surgeon from Blood-Poisoning Due to an Operation

Mr. R. B. Etherington-Smith, aged 36, a rising surgeon of St. Bartholomew's Hospital and a famous oarsman, is dead from pneumococcic peritonitis. He contracted the disease after operating on a patient with gangrene of the lung. He was a man of great personal charm, as well as of promise as a surgeon, and his untimely end has shocked a wide circle.

Government Inquiry Into Nostrums: The Credulity of Physicians

At the last meeting of the government committee appointed to inquire into the advertisement and sale of nostrums, Mr. E. J. Parry, analytic chemist, gave further evidence on behalf of the proprietary articles section of the London Chamber of Commerce. Somewhat inadvertently he revealed the extraordinary credulity of many physicians in regard to the statements made to them about nostrums. He said that the amount of money spent on travelers who call on doctors to induce them to prescribe a given firm's remedies is enormous. He was asked whether they presumed to tell physicians the value of certain drugs and he said they certainly did. He referred to an advertisement in the *British Medical Journal* in which the diseases that a given remedy was claimed to cure were mentioned. When he was asked whether or not, if some one went to physicians with a remedy called "Cureit" and asked them to try it for this and that disease, they would do it, he said that they would.

South African Institute for Medical Research

An institute for medical research in South Africa is being established at Johannesburg. A veterinary institute was erected by the government some time ago near Pretoria. The new institute is to serve the whole of South Africa and will be called the "South African Institute for Medical Research." The industrial diseases of the Transvaal will probably first be investigated, owing to their heavy mortality. It is hoped that the institute will attract skilled workers from Europe. Probably research fellowships will be available for those desirous of carrying out special lines of research. The institute is near a general hospital which is the largest in South Africa. The fact that it will be equipped with four wards, with twenty or thirty beds for patients, will associate the institute with medical work in Johannesburg. It is probable that courses in bacteriology and pathology will be arranged for medical students. The director of the institute is Dr. Watkins-Pitchford, formerly house-physician to St. Thomas' Hospital, London. He studied plague in India, enteric fever in South Africa during the war, and small-pox in London. For the last ten years he has been government pathologist and analyst for Natal, and last year was transferred by the union government to Johannesburg. Dr. Maynard, formerly health officer for the suburbs of Pretoria, and subsequently assistant medical officer to the Witwatersand Association has been appointed statistician to the institute. The building, it is expected, will be completed in about a year.

The Decreasing Consumption of Alcohol

The consumption of alcohol, both as a beverage and as a remedy for disease, has considerably declined in this country in recent years, but with some fluctuations. Accurate statistics for the last fifty years are now available. They show that from 1860 to 1875 the consumption rose steadily; from 1876 to 1885 it fell; from 1887 to 1899 it rose; from 1900 to 1910 it declined; and now there are indications of a fresh cycle of increase. These fluctuations apply also to the amounts consumed per head of the population; but the second maximum about 1900, though higher than the previous one in the total amount, was less per head of the population. The reason for these fluctuations is that although there has been a steady increase of temperance in all classes, the consumption of alcohol depends partly on another factor—the national prosperity, which shows periodical rises and falls. There is a high correlation between "real wages" and the consumption of alcohol. It may be explained that "real wages" are index numbers calculated from money wages after allowing for rents and retail prices. The consumption of alcohol was highest forty years ago, when the average Briton drank in one year 1½ proof gallons of spirits, three bottles of wine, and just under a barrel of beer. In 1910 he drank three-quarters of a barrel of beer, but his consumption of spirits had fallen one-half, and his wine to less than one-half of the former consumption.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 18, 1913.

Women Students in Germany and France

The minister of public instruction has published figures concerning the number of women students in French universities. It is interesting to compare these with the figures furnished in a recent number of the *Revue internationale de l'enseignement supérieur* on the women in German universities. The majority of universities in Prussia and other states of the German empire were not officially opened to women until 1908. Since then the increase in the number of women students in Germany has been constant. In 1912 their number reached the total of 4.8 per cent., and in 1913, 2,795 women were enrolled as regular students. Nevertheless France holds its lead. In French universities during the present school year there were 4,056 women students,

French or foreigners, which was 9.8 per cent. of the total number of students. In proportion to the number of men students there are to-day twice as many women students in France as in Germany. In the latter country philosophy and history are given the preference by women students. In 1911 there were 1,370 women studying these subjects, and in 1912 1,563 out of a total of 2,795 women students. In France the collegiate studies alone are taken up by 2,241 women out of a total of 4,056 women students. Then come medical studies with 582 women students in Germany and 1,057 in France. Scientific studies follow with 504 in Germany and 847 in France. Legal studies appear to attract women in the same proportion in each country. In Germany there were 39 women studying law out of a total of 2,795 and in France 119 out of 4,056. Few women study pharmacy: 8 in Germany and 39 in France.

In Germany as in France, the women students prefer to study in the large cities. Out of a total of 2,795 students there were regularly enrolled in Berlin 845, nearly a third. In Paris there were 2,068 out of 4,056, about one-half. Then followed in Germany Bonn with 255 women students, Munich 188 and Heidelberg 165, while the small universities such as those of Marburg, Tübingen and Jena are much less. In France Grenoble followed Paris with a total number of women students of 317, most of whom are foreigners, but the majority of the whole is furnished by the large towns: Lyons, 188; Lille, 179; Bordeaux, 145; Toulouse, 164; Montpellier, 228; Nancy, 153; Algiers, 105; Aix-Marseilles, 106; Rennes, 84; Dijon, 80; Poitiers, 65; Clermont, 48; Caen, 45, and Besançon, 33.

Digestive Troubles of Cecocolic Origin

At the meeting of the Académie de médecine, April 15, Dr. Pierre Delbet, professor of clinical surgery at the Faculté de médecine de Paris emphasized the fact that chronic appendicitis does not account for all the pains in the right iliac fossa or for all the digestive troubles connected with them. From time to time persons who have been operated on for appendicitis show symptoms that one would not hesitate to attribute to appendicitis, if the appendix had not been removed beforehand. Pains of spontaneous origin persist; McBurney's point is sensitive to pressure; digestive troubles are not improved. Two kinds of lesions seem capable of producing these digestive symptoms: abnormal mobility of the cecum and dilatation of the cecum, sometimes independent of each other, although often associated. Dilatation of the cecum is frequent among patients with appendicitis and it is not easy in such a case to know if this is an effect or the cause of the appendicitis. Abnormal mobility of the cecum is perhaps capable of causing pains by disturbing an appendix less movable than itself but otherwise sound. Delbet has been in the habit for the past ten years, whenever he performs an appendectomy, of reducing the dimensions of the cecum by a plication of the cecum and fixing it to the abdominal wall, if it is abnormally movable. Out of 198 patients operated on in this way Delbet has kept in touch with 52. Only four of these had any pains and 48 did not suffer at all. This proportion, complete cures in 92 per cent. of the cases, is far superior to results which have been reported from simple appendectomy.

There are cases, however, in which cecopexy and cecorrhaphy are not sufficient to make these symptoms disappear. The cecum remains dilated because obstructions exist to its evacuation: adhesions, most often of inflammatory origin, lesions of the biliary passages and of the appendix; and adnexa on the right side and of the colon itself, etc. It is not always sufficient in these cases to cut these adhesions or membranes and free the cecum. It is necessary to have recourse to unilateral exclusion of the cecum or colon; that is to say, anastomosis of the lower part of the small intestine to the large intestine.

Sale of the McLaughlin Electric Belt a Swindle

The persons condemned by the Paris court for selling the "Electro-Vigor" belt of McLaughlin (THE JOURNAL, July 6, 1912, p. 46), appealed the case and the criminal court has confirmed the judgment of the court of Paris by sustaining (1) the judgment recognizing as guilty of swindling the persons who sold electric belts on the false pretense that the apparatus would heal all sorts of diseases, and (2) the damages allowed the *syndicats* of medicine when it was established that the swindlers diverted patients from licensed practitioners, which was prejudicial to the interests represented by the *syndicats*.

Study at the Rockefeller Institute and American Universities

Acting favorably on the suggestion of the Faculté de médecine de Lyon, the council of the university of that city has awarded the prix Falcoux and the prix Crouzet to *agrégé* professors Mouriquand and Leriche. The income of these prizes will be spent in defraying the expenses of study to be carried on at the Rockefeller Institute in New York and in large American universities.

Personal

At the meeting of April 14, the Académie des Sciences elected Dean Landouzy of the Faculté de médecine de Paris academician at large by a vote of 42 out of 55.

Tobacco Angina Pectoris

General opinion attributes to tobacco serious complications of angina, according to a paper which Dr. Fiessinger read before the Académie de médecine. This opinion is not well founded. The sole results of tobacco are anginous neuralgias which remain benign and which cease spontaneously on the removal of the intoxicating agent. When death occurs, it is due to another factor, syphilis. Fiessinger reported the cases of three patients with anginous complications which were attributed to tobacco. There was a reaction showing that they were cases of unrecognized syphilis. Mercurial treatment administered to these patients, who had undergone other treatment without success, led to an immediate amelioration. The diagnosis of serious angina, due to tobacco, should not then be given unless that of syphilis has previously been excluded.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 18, 1913.

Annual Meeting of the German Surgical Association

(Concluded from page 1375)

OPERATIVE TREATMENT OF PULMONARY EMBOLISM

Schumacher of Zurich discussed the symptoms and diagnosis of large emboli of the lung and the indications and technic for Trendelenburg's operation. He based his conclusions on three operations for emboli conducted by the Trendelenburg method in the Zurich clinic, and a few carefully observed necropsies after death from pulmonary embolism. He distinguishes three forms of death from embolism of the lung (1) the almost instantaneous death from shock; (2) death occurring rapidly from very large emboli which completely fill the trunk or the two principal branches of the pulmonary artery; (3) death following after many minutes or even hours from emboli with a protracted course. In cases with a rapid course, operation is more or less obligatory, as there is a chance of saving life. There may be also in these cases anatomic relations which are favorable to an operative extraction of the embolus. In cases with a prolonged course one is justified in resorting to operation if in spite of stimulation an aggravation of the condition cannot be prevented. In two cases of this sort he observed the appearance of a valvular second pulmonary sound which disappeared as the force of the heart became less. Probably this disappearance of the clear tone constitutes a clinical sign indicating that operation should not be delayed.

BONE AND MUSCLE GRAFTING

Küttner of Breslau reported on the permanent results of transplantation of parts from cadavers and from apes. In a child with a defective fibula the bone was transplanted from an ape with a good permanent result. For this purpose the apes which are nearest related to man, such as the *Macacus rhesus*, are best. The graft should be taken from a healthy animal half an hour before the operation on the patient; the animal should be killed and dissected just before the transplantation is to be performed, in order to exclude any chance of infection. Hildebrand of Berlin made a plastic operation on a young woman with facial paralysis who had already been operated on in other ways nine times without success. He separated the sternal portion of the sternocleidomastoid, retaining its innervation, then turned it upward, carried it beneath the skin and sewed it to the angle of the mouth; in addition, a part of the masseter was transplanted. The patient has gained good voluntary control of both angles of the mouth. Long and tedious practice is necessary to train the transplanted muscle in its new function. The face of the patient

presents a good symmetrical appearance; on laughing, however, the musculature of the healthy side predominates.

BLOOD-VESSEL GRAFTING

Lexer of Jena showed a case of ideal operation for aneurysm and transplantation of the vessels. The patient was operated on according to the rules established by Lexer in 1907. To maintain the circulation in its normal channel, the spindle-shaped aneurysm beginning above Poupart's ligament and extending below the arteria profunda was removed and the defect of the vessel repaired by the introduction of a piece of the saphenous vein, 18 cm. long. The wall of the artery markedly changed by arteriosclerosis allowed the threads of the running suture of Carrel to cut through. On the other hand, the continuous protruding mattress suture gave very good service; the thread not only held well but also prevented hemorrhage. The large differences in lumen of the piece of vein and that of the still enlarged artery caused little difficulty in suture. The brilliant result also shows that the piece of vein must have undergone an increase in size, as in experimental work. The patient was a man aged 62 and the case testifies beyond cavil that a transplanted vessel may remain thoroughly permeable. The arteries in the foot now pulsate as powerfully as those on the other side, but they immediately become pulseless when the femoral artery in the region of the transplanted vessel is compressed. The patient, who was operated on nine months ago, is completely free from symptoms.

AFTER NEPHRECTOMY

Kümmell of Hamburg gave a summary of his researches on the later fate of patients after nephrectomy. Subsequent investigation of 386 patients after nephrectomy showed that in the tuberculous cases there was a permanent cure in 80 per cent., with malignant tumors in 40 per cent., in hydronephrosis in 98 per cent., and in pyonephrosis in 90 per cent. Injuries when unilateral give good prognosis, but nephritis gives an unfavorable one. With polycystic degeneration, nephrectomy is contra-indicated. In tuberculosis one may speak of permanent recovery after two years, with malignant tumors after four years. A large number of the patients died the first year after the nephrectomy. Disease of the other kidney makes the prognosis distinctly unfavorable; but in rare cases recovery may occur even here. This occurred in one case after an incision of the remaining kidney. Patients with only one kidney left, as a rule, passed through a pregnancy without disturbance. Only in one case out of seventeen did nephritis occur and in one case a premature birth. Patients with one kidney tolerate morphin, anesthesia by ether, and the injection of diphtheric antitoxin well, but bear chloral and veronal badly. Permission to marry may be given to women after nephrectomy done for tuberculosis and malignant tumors if they have remained well for two and four years, respectively. Patients with one kidney are not eligible to military duty, although officers with only one kidney may perform efficient duty.

Baecker reported on the fate of 100 patients on whom nephrectomy had been performed between 1901 and 1912 at the Berlin university surgical clinic. Nine patients died directly after the operation. Of the remaining ninety-one, twenty-eight died of intercurrent disease and three from uremia, so that out of 100 patients on whom nephrectomy was performed sixty survived. Tumors showed the most unfavorable results; all the eighteen patients under observation died from local recurrence or metastasis; but all these tumors were malignant and far advanced. In all other affections, particularly hydronephrosis and pyonephrosis, unilateral nephritis, acute suppurations of the kidney, and especially tuberculosis, the end-results were very favorable. Statistics show that great progress has been made every year in our modern methods of functional examination, and in the diagnosis, operative indications and prognosis of the surgical diseases of the kidney.

THYMECTOMY

Von Haberer of Vienna has performed thymectomy, according to Garré's method, in four cases of exophthalmic goiter or hyperthyroid conditions. In the fifth case the thymus was removed on account of the symptoms of stenosis which were caused by it. In all cases the operation gave a good result. In one case a man 30 years of age, after a febrile disease in 1909, developed acute exophthalmic goiter which began with severe heart symptoms. Other operators had previously performed partial thyroidectomy on one side and ligated the thyroid artery on the other. In spite of this, all the nervous, and especially the heart symptoms, grew worse. The patient complained of attacks of suffocation with mental dulness. There was dilatation of the heart with displacement of the apex-beat to the axillary line, large congested liver and congested spleen, and the radial pulse was scarcely palpable. The intern who was called diagnosed the heart at that time as a fatigued heart, and gave an unfavorable prognosis. Only at the urgent requests of the patient and his relatives, von Haberer decided on thymectomy. Local anesthesia was used. Instead of the expected large thymus gland only a very small one was found. Histologically the thymus was found to be decreasing in size, but it contained a surprisingly large number of Hassal's corpuscles. The success of the operation was striking. It did not follow immediately, but comparatively soon. At present the dilatation of the heart has disappeared, the apex-beat is found within the mammillary line, and the congested liver has completely receded. The radial pulse is 84, full and strong, although still a little irregular. The nervous symptoms, tremor and restlessness, have disappeared. The patient, who is now free of all heart trouble, was recently able to undertake without difficulty a trip through the mountains. The operation was performed four months ago.

GALL-STONE OPERATIONS

Kehr of Berlin presented the results of 2,000 operations on the biliary passages. Comparison of the first and second thousand shows the following: The total mortality has increased. The explanation of this lies in the increased number of malignant cases. The mortality in patients with uncomplicated gall-stones has decreased, especially in patients in whom hepatic drainage was performed. Kehr explains this by the influence of the T drainage. The total mortality is 16.7 per cent., and that of simple gall-stone cases is 3.2 per cent. If the death-rate is compared as given by different authors, great differences are found. These, however, depend on differences in the material, and Kehr draws the following conclusions: The total mortality corresponds approximately to the percentage of malignant complications plus the death-rate of from 2 to 3 per cent. in patients with uncomplicated gall-stones. Two things we know: 1. No peritonitis results even if operation is done without gloves or mask. 2. No severe wound infections will result if the fatty layer is not sewed. There are two things, however, that have not been accomplished, namely, anesthesia free from danger and prevention of hemorrhage in patients with jaundice. He will be the best laparotomist or gall-stone surgeon who will discover a method of anesthesia, free from the dangers of ether or chloroform, which will protect the patient against pneumonia and embolism. Against the danger of hemorrhage in patients with jaundice there is at present only one remedy, early operation. We must put a stop to the custom of calling a surgeon only at the last moment when the cholemic diathesis is complete. For obvious reasons cases of functional icterus will probably never be amenable to the knife, but mechanical icterus, on the whole, presents a good opportunity for operation if not delayed too long. Unfortunately, it is not always possible to distinguish between functional and mechanical icterus.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 18, 1913.

One Year's Work of the First-Aid Corps in Vienna

The Vienna Rettungsgesellschaft, as it is commonly called (voluntary first-aid corps), has just published its report for 1912. No less than 35,920 cases were treated, or an average of 98 per day. The various items were: 6,971 cases of sudden illness which required first aid in streets or public buildings; 12,663 injuries and accidents; 327 cases of mental derangement; flying ambulances had to be furnished 124 times in various places. No less than 737 times the corps was called by mistake. The number of suicides or attempts at such amounted to 1,387 (only those are included in which the corps was called). It is interesting to find that the majority of these attempts was undertaken by poison (537). Shooting was used by 276 persons; knives by 130; 132 drowned themselves; 129 hanged themselves; 100 jumped down from various heights, and 80 took gas for suicidal purposes. The majority of interventions of the corps was by call of the police or other authorities; private persons called the first aid only 6,839 times. The number of accidents shows how dangerous modern industrial life is still in spite of all precautions; 1,465 persons became victims of street vehicles; 1,532 in industrial undertakings and factories; 488 injuries were caused by combustible substances; 456 persons were injured in the building of houses; 618 injuries were due to intoxication by alcohol.

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In schools 42 children suffered accidents, 29 persons were killed by electric currents, 102 persons were bitten by animals, and 91 persons collapsed for want of food or from cold. The corps has instituted special first-aid classes (Samaritan Classes) for all circles of the population. These were attended last year by 900 persons, and numerous teachers of both sexes, as well as members of factories, the police-force, artisans and shopkeepers formed the audience. They had to pass certain examinations to show that they had profited enough by the lectures and demonstrations to be useful in preventing loss of life in cases of urgency. The report also mentions the coming congress for first aid which will take place in Vienna in September, and it is clear that it will be a real success, because so many eminent men from all countries will take part in the proceedings of this important convention. [The population of Vienna is somewhat over one and a half million. —Ed.]

Marriages

ARTHUR CLYDE KNIGHT, M.D., Warm Springs, Mont., to Miss Mathilde LeRoy of Anaconda, Mont., at Butte, Mont., April 9.

OSCAR RICHARD FLETCHER, M.D., Sanford, Va., to Miss Nancy Virginia Taylor, at Temperanceville, Va., April 17.

FRANCIS BRINTON JACOBS, M.D., Philadelphia, to Miss Phebe Anne Price of Whitford, Pa., at Glen Loch, Pa., April 24.

HOWARD S. ANDERS, M.D., to Mrs. Maud Howland Wiggins, both of Philadelphia, in New York City, March 12.

CHESTER OVERTON BURRUSS, M.D., Fredericksburg, Va., to Miss Margaret Byers, at Sharon, S. C., April 17.

WILLIAM LAWSON THORNTON, M.D., Birmingham, Ala., to Miss Leila DeVan Dumas of Mobile, April 29.

CHARLES DANIEL EASTON, M.D., Newport, R. I., to Miss Margaret Hays of New York City, April 23.

MAURICE A. LOEBEL, M.D., Chicago, to Miss Jessie J. Marshall of Seneca, Ill., in Chicago, April 26.

JOHN D. SPELMAN, M.D., Cincinnati, to Miss Felicia Hangar of Staunton, Va., at Cincinnati, April 17.

FOSTER MILLER HULL, M.D., to Miss Carmelita Marie Orsatti, both of Los Angeles, April 23.

JOSEPH LELAND, M.D., Tuscaloosa, Ala., to Miss Margaret Patton of Birmingham, Ala., April 16.

FREDERICK JOHANSEN, M.D., to Miss Alma Morris, both of Carthage, Mo., in Chicago, March 27.

WILBUR L. LECRON, M.D., to Mrs. S. W. Rosencrantz, both of Milwaukee, April 12.

Deaths

Samuel Willard (license, Illinois); surgeon of the Ninety-Seventh Illinois Volunteer Infantry during the Civil War; founder and first librarian of the Springfield Public Library and superintendent of city schools; from 1890 to 1897 teacher of history in the West Division High School, Chicago; died at his home in Chicago, February 9, from senile debility, aged 91.

Robert Campbell, M.D. Queens University, Belfast, Ireland, 1872; assistant registrar of vital statistics of the Health Department of the City of New York, assigned to the Borough of Queens; for sixteen years a member of the dermatologic staff of the New York Dispensary, died at his home in Jamaica, Long Island, April 19, from acute gastritis, aged 63.

Rosa Kleine Martin Upson Liebig, M.D. University of Michigan, Ann Arbor, 1881; said to have been the first woman to have been admitted to membership of the Iowa State Medical Society; overseer of the poor of Marshall County; for several years secretary and treasurer of the Iowa Public Health Association; died at her home in Marshalltown, April 24, aged 67.

Oliver H. Koons, M.D. Jefferson Medical College, 1883; of Brooklyn; a specialist on diseases of the throat; while driving near his country home at South Orange, N. J., April 21, suffered a cerebral hemorrhage from which he died while being taken to the hospital, aged 60.

Thomas J. Symington, M.D. Queens University, Kingston, Ont., 1881; a member of the American Medical Association; formerly president of the Austin Flint Medical Society; for many years local surgeon at Ackley, Iowa, for the Illinois Central and Minneapolis and St. Louis railroads; died at his home, April 21, from erysipelas, aged 56.

Joseph V. M. Cain, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1893; formerly professor of obstetrics and gynecology and president of the faculty of his alma mater; professor of gynecology in the Hospital Medical College, Atlanta; died in a private sanatorium in Atlanta, April 18, aged 55.

Francis M. Hiett, M.D. Rush Medical College, 1865; one of the charter members of the Medical Society of the Missouri Valley; for thirty-two years a practitioner of Red Oak, Iowa; died at the home of his son in Metaline Falls, Wash., April 3, from carcinoma of the gall-bladder, aged 73.

Winfield Scott Sayler, M.D. Medical College of Ohio, Cincinnati, 1880; a member of the Ohio State Medical Association; who suffered amputation of the right leg on account of septicemia, recently; died a short time after from surgical shock, aged 59.

Addison McArthur Bourland, M.D. University of Nashville, Tenn., 1858; a veteran of the Mexican War, and of the Civil War in which he served as surgeon in the Confederate Service; died at his home in Fort Smith, Ark., April 23, from senile debility, aged 87.

Joseph Benson Fenwick, M.D. Harvard Medical School, 1872; once city physician of Chelsea and a member of the Massachusetts Medical Society; died at his home in Chelsea, from senile debility, hastened by a fracture of the hip several months before, aged 75.

Henry M. Connelly, M.D. Medical College of Indiana, Indianapolis, 1882; until 1900 a practitioner of Flatrock, Ind., and since that time a resident of Shelbyville, died at his home in that city, April 20, from cerebral hemorrhage, aged 62.

George Macaulay, M.D. Jefferson Medical College, 1886; acting assistant surgeon, U. S. P. H. S. since 1901; a member of the Association of Military Surgeons of the United States; died at his home in Jacksonville, Fla., April 21, aged 48.

James Richard Hull, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1880; for twenty-seven years a practitioner of Good Hope, Ill.; died in St. Anthony's Hospital, Rock Island, Ill., March 27, from nephritis, aged 52.

Simon Hubler, M.D. University of Pennsylvania, Philadelphia, 1879; a veteran of the Civil War; a practitioner of Herrick Center, Elyburg and Dunmore, Pa.; died at the home of his son in Scranton, Pa., April 24, aged 69.

Frederick Charles Johnson, M.D. University of Pennsylvania, Philadelphia, 1883; editor and proprietor of a daily paper in Wilkes-Barre for many years; died in Dallas, Pa., March 5, from paralysis agitans, aged 60.

Andrew S. Bonebrake, M.D. Jefferson Medical College, 1872; a retired physician of Baltimore and formerly a practitioner of Waynesboro; a veteran of the Civil War; died at his home in Baltimore, April 24, from nephritis, aged 65.

George Thomas Carson, M.D. Rush Medical College, 1896; a member of the American Medical Association; superintendent of the Chatsworth (Ill.) Sanitarium; died at his home in that city, April 26, from pneumonia, aged 52.

Frank Pierce Smith, M.D. Bellevue Hospital Medical College, 1877; a pioneer practitioner of Canton, S. Dak., but for the last two years residing on a ranch near Meadow, S. Dak.; died at his home, April 19, aged 60.

Emma Cornwell, M.D. Chicago Homeopathic Medical College, 1884; said to have been the first woman practitioner of Crawford County, Iowa; died at the home of her daughter in Denison, April 20, aged 73.

Clarence Albert Treuholtz, M.D. Cooper Medical College, San Francisco, 1897; captain, M. C., U. S. Army; a member of the American Medical Association; died at his station at Fort Bayard, N. Mex., April 15, aged 36.

Jacob Kissel, M.D. Cornell University, New York City, 1906; formerly a member of the staff of the German Hospital, Brooklyn; died at his home in Glendale, Brooklyn, April 19, from peritonitis, aged 30.

Erasmus Darwin Loing, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1882; of Belvidere, Ill.; formerly of Brandon, Fla.; died in the Elgin State Hospital, April 14, from arteriosclerosis, aged 80.

Arthur S. Capron, M.D. Albany (N. Y.) Medical College, 1886; of Albany; a member of the American Medical Association; died suddenly in a hotel in that city, April 22, from heart disease, aged 63.

Joshua M. List, M.D. Cleveland University of Medicine and Surgery, 1875; president of the Citizens' National Bank of Evans City, Pa.; died at his home in that place, about April 21, aged 71.

Orlando Wood Sherwin, M.D. Dartmouth Medical School, Hanover, N. H., 1866; a member of the American Medical Association; died at his home in Woodstock, Vt., April 17, aged 75.

Garrard Fordyce, a veteran of the Civil War and for several years a practitioner of Livingston County, Ill.; died at his home in Ancona, February 10, from uremia, aged 78.

Frederick L. Preston, M.D. Hahnemann Medical College, Philadelphia, 1877; died at his home in Chester, Pa., April 21, from cerebral hemorrhage, aged 69.

William C. Hoover, M.D. Rush Medical College, 1869; died at his home in Haddon Township, Vigo County, Ind., about April 24, from senile debility, aged 83.

William Swango, (license, Kentucky, thirty years' practice, 1894); formerly of Maytown, Ky.; died at his home in Toliver, Ky., April 21, aged 69.

Joseph L. G. Masson, M.D. Victoria University, Coburg, Ont., 1890; died at his home in Terrebonne, Que., April 19, aged 49.

Milus L. Moody, M.D. University of Texas, Galveston, 1898; of Greenville; died in Bentonville, Ark., April 19, aged 43.

Leonard S. Byers (license, Indiana, 1885); died at his home in Sceleyville, April 24, from pneumonia, aged 62.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

THE DUKET "CONSUMPTION CURE"

About the time that Friedmann's press-agents were getting in their finest work, and when any news item—no matter how bizarre—regarding a consumption cure, made good newspaper "copy," the Chicago newspapers came out with sensational articles regarding a locally exploited "cure" for the white plague. Dr. Peter P. Duket of Chicago had produced, we were told, a "serum" that would cure tuberculosis. It is probable that Chicago newspapers would not have "fallen for" this canard, if it had not been given an artificial news value by the fact that the "cure" was financed by William Lorimer, who for a time occupied a seat in the United States Senate.

Newspaper notoriety seems to have been assiduously cultivated, and the "Duket serum" has been given publicity at stated intervals from the time of the first sensational articles in the early part of March until the present. The latest developments are that Mr. Lorimer has asked the governor of each state in the Union to send a representative to Chicago to watch the Duket "cure." Furthermore, he seems to have brought his influence to bear at Washington, for the papers state that an investigation of the Duket "cure" is to be undertaken by the United States Public Health Service.

So many inquiries have been received by THE JOURNAL regarding the Duket "serum" that we feel there is an urgent need of giving physicians such facts as we have already at hand. We have postponed publishing such matter as we have in the hope that we could have completed our investigations of this widely vaunted treatment. If conditions warrant it the result of these investigations will appear in due time.

Peter P. Duket was graduated by Hahnemann Medical College, Chicago, in 1893. He was licensed to practice in Ohio in 1896 on the presentation of his diploma, examinations for licensure not being required in that state until 1900. His name does not appear in the medical directories for the year 1896, but in 1900 he seems to have been at Bowling Green, Ohio. His name is again absent from the directories for 1902, 1904 and 1906, but appears in the issues of 1908, 1910 and 1912 under the city of Toledo. In 1902 Duket presented his diploma and obtained a license to practice in the state of Michigan. In June, 1911, and again in January, 1912, Duket made application for license to practice medicine in Colorado. It was refused. But he obtained a license to practice in New Mexico in January, 1912, the license being granted on presentation of diploma. While in New Mexico in 1912, Duket wrote to the Ohio State Board asking that board to endorse him to the Texas board. The Ohio board "inquired regarding his moral and professional standing," and as a result of this inquiry the secretary of the Ohio board "was instructed to refuse the endorsement." In January, 1913, Duket was granted license to practice in Illinois.

In connection with Duket's application to the Colorado State Board of Medical Examiners for licensure in that state, some interesting points were brought out. In the course of Duket's efforts to get a Colorado license, he appealed to a prominent Denver politician, who appeared before the board in Duket's behalf. During the course of the hearing, however, the politician himself seems to have become skeptical of Duket's good faith. Duket is said to have claimed at that time that he was curing tuberculosis with a "lymph" obtained from goats. The politician-friend asked Duket where he kept his goats. Duket is said to have hesitated and finally answered that he had one goat that he kept at a certain address in Toledo, Ohio. The politician had the chief of police of Denver wire the chief of police of Toledo to locate the goat. The Toledo police chief both wired and wrote that investigation indicated that Duket had not at that time and never had had any goats quartered at the address given.

DUKET'S FINDLAY SANATORIUM

In 1910 and 1911 Duket was operating what he called the "Tubercular Sanitarium Company" at Findlay, Ohio. He was using this concern as headquarters for the exploitation of his so-called serum. Business apparently being slow, Duket seems to have gone about the country drumming up patients. He issued a somewhat elaborate booklet describing the sanatorium and giving some indefinite information regarding his medicament. When in a town he would send out this booklet to prospective victims with a rubber stamp imprint on its title-page giving the name of the hotel at which he was staying and the time that he could be seen.

CLAIMS MADE FOR DUKET'S CURE

From this booklet we take the following quotations:

"The only treatment that is to be considered is an intravenous treatment with an antiseptic lymph."

"This antiseptic lymph is non-toxic, non-irritant and subdues the inflammation of the lungs."

"In our treatment we use an antiseptic lymph which is a recent discovery and has been used by ourselves exclusively."

"There is no other institution in the world that has the same antiseptic lymph."

"It is not made from any product from tubercle bacilli."

"When given intravenously, the action of the germs ceases. The patients are restored rapidly to their normal weight enabling the system to assist the antiseptic in destroying the germs and curing the disease."

With the usual assurance of exploiters of "consumption cures," Duket was not at all modest in the claims made for his "antiseptic lymph." Here is what he gave as the percentage of "cures" made by his "treatment":

Patients in the first stage, 90 per cent. of cures.

Patients in the second stage, 75 per cent. of cures.

Patients in the third stage, 50 per cent. of cures.

To a layman who wrote to the Findlay institution Duket replied in part:

"The length of time required to be at the sanitarium or to effect a cure is 10 weeks. In some cases, of course, it may be longer than that.

"We have made some very remarkable cures and hope that you will not delay in coming."

V. 6
1913

As this letter was not answered, a few days later another communication came from Duket, four pages in length, urging the prospective patient to come to Findlay. "The treatment is safe, and none but good results follow," the recipient of the letter was told. This does not seem invariably to have been the case. A tuberculous subject who had been to the Ohio State Sanatorium and returned greatly improved took Duket's treatment. Each injection was followed by a rise in temperature and chill and in a few weeks all the good that had been accomplished at the state institution was undone. The poor fellow died and his brother writes that neither the deceased nor he noticed any improvement when his brother returned from Duket's sanatorium.

Here then is another alleged cure for tuberculosis being foisted on the public by a man who has no scientific standing and who has had little or no scientific training. Nor is this all. Duket has succeeded in enlisting the help of men whose motives we need not question and whose influence is immeasurably greater than his own. Thus the potentialities for harm are enormously increased. At an early date we hope to be able to give our readers further details regarding the results of the "cure" itself. In the meantime, every physician will, in the interest of his tuberculous patients, do well to give them such facts as we have presented regarding this latest cure.

TIME, THE REVEALER

The matter quoted below is taken from a report of the evidence before the Select Committee on Patent Medicines, at present in session in London, which appeared in the *Chemist and Druggist*. The subject was led up to by a statement of the chairman of the committee regarding that part of the United States Food and Drugs Act which requires that "patent medicines" containing acetanilid should have the presence of that drug declared on the label. Mr. Lawson, whose testimony is given, is the manager of Daisy, Ltd., a concern whose products are referred to editorially in this issue. The italics are ours:

"Mr. Lawson made an interesting statement on the subject as *told to him by the president of the Antikamnia Co.* He was informed that when the law was brought in in America it was decided that the acetanilid should be named on the label; the Antikamnia Co., to avoid that, stopped using acetanilid and substituted phenacetin. Later the American Board [Department] of Agriculture decided that phenacetin should likewise be disclosed, *but before that happened the company worked off their superfluous stock (containing acetanilid) on the European market.* Now Antikamnia contains phenacetin, but NINE-TENTHS OF THE ANTIKAMNIA TRADE IN THIS COUNTRY HAS BEEN BUILT UP ON PRESCRIBING BY MEDICAL MEN of the acetanilid preparation."

In reply to a question from the chairman, we read: "Witness said *Antikamnia had been for years, and still is, advertised in the medical papers.* Moreover, the company have representatives calling on doctors and getting them to prescribe Antikamnia. The chairman was very interested in that statement, which was evidently new to him, and he wanted to know *what kind of arguments such representatives used to induce medical men to prescribe acetanilid as Antikamnia.*"

TONGALINE

Sodium Salicylate Sold Under a Fancy Name

Tongaline, manufactured by the Mellier Drug Company, St. Louis, is essentially a preparation of sodium salicylate. It is also said to contain tonga, though whether it does or not we have attempted neither to prove nor to disprove. Tonga is an inert substance whose history in medicine, while interesting, is by no means unique. The story goes that it was used originally by the native "medicine men" of the Fiji Islands and that it consisted of an infusion of the roots and barks of various plants indigenous to those islands. A supply of the crude drug was carried to England by a man who had lived for a short time in the Fiji Islands and it was placed in the hands of a retail house in London. This occurred about 1879. In 1880, two English physicians of repute published laudatory articles on the therapeutic value of tonga in neuralgia and rheumatism. This created a demand for the drug which extended to the United States. It was put on the market in this country by Parke, Davis & Co., who were proceeded against by the London house for using the name "Tonga," which the British house had registered as a trade-mark. Parke, Davis & Co. won the suit and continued to sell what it called a "Compound Fluid Extract of Tonga."

It was not long before the therapeutic inefficacy of tonga in neuralgia and rheumatism was made apparent and the demand for it gradually diminished. At the zenith of its popularity, however, the shrewd idea had been conceived of commercializing this popularity and of perpetuating the word "tonga." Thus was Tongaline born. The Mellier Drug Company realized the impossibility of creating any marked demand for a nostrum unless it had some real drugs in it—hence the presence of the salicylates. What the actual composition of Tongaline is, no one but the manufacturers know. At one time the following was given as the formula:

Fluid Tonga	30 grains
Extract of Cimicifuga Racemosa	2 grains
Sodium salicylate	10 grains
Pilocarpin salicylate	1/100 grain
Colchicin salicylate	1/500 grain

These amounts refer to the quantity of drugs in each fluidram of the preparation. Whether the nostrum still has this composition we do not know, but assuming that it has, it is quite evident that sodium salicylate is the essential and active ingredient.

Tongaline was first put on the market as a cure for neuralgia and rheumatism. Now the history of the nostrum business shows that it is commercially impracticable to establish a continued demand for a preparation recommended as a cure for only one disease. To be long-lived, a nostrum must be a panacea—it must be "good" for many things, if not for everything. It is not surprising then to find that Tongaline was not on the market long before it was being recommended for many and various pathologic states. Tongaline was even inferentially recommended for yellow fever during the epidemic of that disease in 1906. When criticized for such outrageous mendacity, the firm "hedged" and denied that it had intended to convey such an implication. Here are some of the claims made for Tongaline:

"It cures rheumatism, neuralgia, grippe, gout, headaches, malaria, sciatica, lumbago, tonsillitis, heavy colds and excess of uric acid."

"An infallible remedy for neuralgia, rheumatism, nervous headache, la grippe, gout, sciatica and lumbago."

"Exercises a positive and rapid anodyne effect."

"Has a peculiar affinity for poisonous and viscid secretions, which it eliminates promptly and thoroughly."

"Is a most efficient agent in the treatment of all forms of malaria."

"The ideal prescription for diseased conditions caused by habitual or periodic alcoholism."

"For indefinite aches and pains."

Is it conceivable that any physician in his right mind would believe that the salicylates would be of value in all the multifarious conditions here named? Yet under the magic word Tongaline the medical profession has for years been prescribing this mixture and, worse yet, the public has been paying for it. Is there any excuse for such unscientific empiricism? If not, how long will our profession tolerate it?

Some physicians who are surely familiar with the uses and limitations of the salicylates, instead of prescribing them in definite quantities and under their own names, prescribe nostrums containing them, such as Tongaline and Hymosa. Knowing the action and value of acetanilid, phenacetin, etc., some men prescribe these useful drugs in uncertain amounts under the names of Antikamnia, Pas-Avena, Ammonol, Phenalgine and what not. Instead of prescribing hexamethylenamin, they make their patients pay fancy prices for the same drug under the names Uriseptin, Formin, Cystogen, etc.

The economic phase of this problem is bad enough in all conscience but it is not the worst. There is the much greater evil of prostituting the science of medicine and setting back

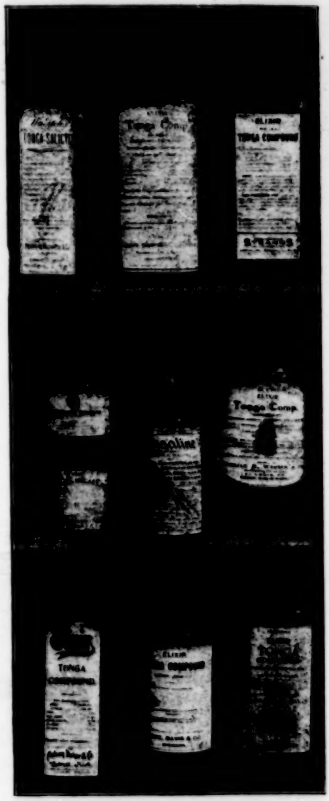
the clock of therapeutic progress. Such things as these tend utterly to discredit the medical profession in the minds of thinking laymen. Within the past few weeks British physicians must have been chagrined by the facts brought out at the "patent-medicine" inquiry now going on. At least they would have been chagrined if their medical journals had had the courage to report the evidence as it was given at the inquiry. The chairman of the investigating committee expressed surprise when he learned that physicians were in the habit of prescribing such a well-known drug as acetanilid under a fanciful name and with no knowledge of the composition of the product. The chairman doubtless has many other surprises coming. Possibly one will come when he learns that the salicylates are prescribed under the name of a worthless and inert drug.

ELIXIR OF TONGA COMPOUND

Keeping a Dead Drug Alive by Artificial Means

The exploitation of Tongaline, just described, brings to light another evil of the nostrum business that is little appreciated. Tonga itself is therapeutically dead. But the name "tonga" still has commercial possibilities. This is because the extensive advertising of Tongaline has unconsciously kept alive in the minds of the medical profession a feeling that tonga has certain valuable—if mysterious—properties. As a result practically every large pharmaceutical house puts out a tonga mixture in the hope of reaping some financial benefit from the advertising of Tongaline. This illustrates once more the evil influence that proprietorship in medicine has on the science of therapeutics. If Tongaline or some similar mixture containing, or supposed to contain, tonga were not advertised for the next five years, tonga would be forgotten and relegated to the place it belongs—the therapeutic scrap-heap. But the power of advertising is sufficient to keep this utterly valueless drug alive just so long as it is sold in mixtures which contain in addition to the inert tonga some really valuable drugs.

Most of these tonga mixtures put out by pharmaceutical manufacturers appear in the form of compound elixir of tonga. These elixirs are claimed to contain tonga; whether they do or not, no one but the makers know. They also are claimed to contain the salicylates, cimicifuga, small amounts of colchicum and pilocarpin, and in some instances also acetanilid, gelsemium and potassium iodid. The name in most cases is deceptive, or at least misleading, in that the word "tonga" is emphasized while the important drug in the mixtures is given secondary consideration. We have arranged in tabular form some of the various tonga preparations and the composition that is claimed for them. Similar lists could be made of other equally unscientific mixtures that are put on the market by firms, which while professing to have the interest of scientific medicine at heart, are willing to prostitute pharmacy for profit.



Tongaline and some of its many imitations.

TONGA PREPARATIONS AND THE COMPOSITIONS CLAIMED FOR THEM

CLAIMS FOR COMPOSITION (GRAINS OR MINIMS IN EACH FLUIDOUNCE)

Preparation and Manufacturer	Tonga	Cimicifuga	Sodium Salicylate	Pilocarpin Salicylate	Pilocarpin	Colchicin Salicylate	Wine of Colchicum	Colchicin	Acetanilid	Tr. Gelsemium	Fl. Ex. Hydrangea	Potas. Iodid	Lith. Benzoate
Elixir Tonga Compound—Parke, Davis & Co.	64	16	40	8/100	.....	8/500	..	.....	...	..	..	..	..
Elixir Tonga Compound—F. Stearns & Co.	60	3⅞	68	1/128	.....	1/64	..	.....	...	..	..	..	..
Elixir Tonga Compound—Wm. R. Warner & Co.	120	16	80	8/100	.....	8/500	..	.....	...	..	..	..	..
Elixir Tonga Compound—Eli Lilly & Co.	120	16	80	.....	8/100	.....	..	8/500	...	..	..	..	..
Elixir Tonga Compound—Hance Bros. & Co.	15	16	40	.....	8/100	.....	..	8/500	...	..	..	..	..
Elixir Tonga Compound—Ray Chemical Co.	4	60	14	.....	8/100	.....	..	8/500	8	..	..	..	..
Elixir Tonga Compound—Nelson, Baker & Co.	4	60	14	.....	8/100	.....	..	8/500	5⅞	..	..	..	..
Elixir Tonga & Salicylates—Wm. S. Merrell Chem. Co.	120	16	40	8/100	.....	8/500	..	.....	...	16	..	..	..
Elixir Tonga & Salicylates—Sharp & Dohme	120	16	30	8/100	.....	8/500	..	.....	...	..	..	..	..
Tonga-Salicyl—Henry K. Wampole & Co.	20	0	40	1/10	.....	.....	40	.....	...	..	8	4	16
Tongaline—Mellier Drug Co.	240	16	80	8/100	.....	8/500	..	.....	...	..	..	..	..

Correspondence

Healthy Employees in Kitchen and Dining-Room

To the Editor:—In THE JOURNAL, April 26, p. 1310, appears a news item headed "Waiters Must Be Healthy," which mentions the safeguards against communicable diseases enforced by the Pennsylvania Railroad Company among its employees in dining-car and restaurant service. This is so fully in line with what I have been urging in St. Louis for a number of years that I desire to enlarge somewhat on the topic, as it is of immediate hygienic concern to every person who eats in public or semipublic places, as dining-cars, clubs, hotels and restaurants.

Several years ago a movement was begun here for the formation of a local club, the declared purpose of which was the advancement of wholesome civic conditions, general and special. On joining the club I conceived the occasion opportune to address a letter to its president, calling attention to the importance of starting right and with clean hands as concerned kitchen help and dining-room service, by requiring that every proposed employee should undergo a strict physical examination, to be conducted preferably by the health department as a part of its regular work, and that no one should be employed who could not present from that official source a certificate attesting the clean, sound personal health of the applicant. It was further advised that every person thus employed should be subject to supplemental tests as might be provided in rules to be framed later, and that employees of this selected class should receive a higher wage than those not thus tested, if the latter were taken into club service.

These suggestions seemed to find favor at first; but later, as is common, lions were found in the way, or what appeared as such—most likely on close examination they would have been found to be merely stuffed felines rather the worse for moths—and nothing was done. Some time later when a syphilitic waiter appeared to take an order for luncheon, I thought that the limit had been reached, and my resignation was soon sent in and accepted.

Such an experience is not exceptional, as any physician with open eyes may prove who frequently eats in public places, and the danger may be greatest in establishments of most pretentious claim in which sanitary suspicion would be lulled by fine appointments. It is not an uncommon occurrence in some of the most exclusive eating concerns for the fingers of the waiter to visit his mouth when supplying a napkin to a diner; and rolls, cutlery, plates, etc., are served with the same unsterile fingers. Tuberculosis, syphilis, diphtheria, cancer and other dangerous and revolting ailments affect the mouth and air-passages often in concealed form; hence the imperative hygienic need for barring from table and kitchen service among self-respecting people, by means of a searching medical examination, every person found thus affected, esthetic considerations weighing as well as those that are prophylactic and hygienic.

GEORGE HOMAN, M.D., St. Louis.

Need for a Physician in the Mountains of North Carolina

To the Editor:—Far up in the mountains of North Carolina is a little hospital, founded and run by a trained nurse, Miss Lydia Holman, who for twelve years has quietly worked among these mountain people, not only bringing to them medical aid and care, but also teaching modern sanitary improvements, hygiene and social betterment. When the railroad ran its line through Altapass, a small building was erected for use during its construction, and after the completion of the road, seeing the splendid work Miss Holman was doing there, the railroad gave the building to her to use as a hospital.

Miss Holman's work covers a large area, patients traveling many miles to reach the little hospital, or sending for her in all sorts of weather, night or day, so that her work has really become that of a physician as well as a nurse, because she could not refuse medical aid when it was needed and there was no one else to give it. This even resulted at one time in her arrest for practicing medicine. Finally a doctor was found, but after a year or two of work down there he has left, and again Miss Holman, with the help of one or two nurses, is bearing the immense burden of this work.

Patients with typhoid (of which a large number of these people die), pneumonia, tuberculosis, all sorts of surgical cases and even the victims of a small-pox epidemic have been cared for by Miss Holman. One of the first things which called her attention to the great need of medical aid in this region, was a report of the terrible death-rate among the mothers, and the spectacle of babies sick and deformed for life because they had not had proper hospital treatment at birth.

For many months she has been looking for a physician to help her, and brave and plucky as she is, no woman can possibly keep on doing the enormous work she is doing and taking the great responsibility that she is taking without ultimately breaking down under the physical strain. This is an opportunity for some man to do a wonderful good in a community of our own white citizens, a race of people descended from the Scotch, Irish and Germans who fled to these mountains during the Revolution. They are self-respecting and independent, and although living such isolated lives far from civilization, when given the chance, they respond readily to those influences which make toward more enlightened social conditions.

It is not a place in which a man will gain general reputation, wealth or public praise, but to one who cares more about helping others than about worldly gain, this is an opportunity the possibilities of which cannot be exaggerated. The income would probably be about a hundred dollars a month and any fees a physician might make at the small hotel there. Of course only a man with the ability and training to cope with every sort of disease and emergency would be fitted for such a position; but when we think of all the fine medical schools scattered throughout the country, it seems as if there ought to be no trouble or delay in securing the right sort of physician.

We hear of many men willing and anxious to go to China, India and other lands as medical missionaries, or of physicians gladly volunteering to go to Labrador with Dr. Grenfell; surely there is one who will find his work in helping our own people—Americans who live such lonely, desolate lives, growing old and dying before their time because of the lack of teaching as to proper sanitary and hygienic modes of life, as well as aid in sickness. Among all our young physicians there must be a man who will respond to Miss Holman's call.

AGNES WILLARD BARTLETT, 21 Pierrepont Street, Brooklyn.

Report of Cases of Wood-Alcohol Poisoning

To the Editor:—In THE JOURNAL of April 19, 1913, p. 1247, a query was inserted concerning articles on wood-alcohol poisoning. A report of four cases that I have treated may be of general interest.

In 1910 four adult male Winnebago Indians obtained 4 ounces of wood-alcohol at a drug-store on the pretense that it would be used as a liniment, but they drank the full quantity. Two of them soon became comatose and died on the third and fourth day after. The third was comatose three days and within a month had recovered except that his vision was completely lost. The fourth, who evidently drank only a small quantity, suffered no ill effects.

Another case occurred in 1912. A mixed-blood Menominee Indian obtained a pint of wood-alcohol from the matron at the Menominee Indian Hospital, saying that he wanted it to clean his paint brushes. He drank only a small part of this and continued his work for two days; on the third day he died after hours of excruciating pain in the epigastric and temporal regions.

All three deaths seemed to be due to respiratory suppression.

EDWARD L. SWADENER, M.D., Keshena, Wis.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

EXTRA-UTERINE AND INTRA-UTERINE PREGNANCY COMBINED

To the Editor:—The following case suggests the need of better knowledge of the possibilities of a combination of extra-uterine and intra-uterine pregnancy:

Mrs. X., aged 25, had been married three years. She had never been pregnant. Menstrual trouble began at 18 years of age, painful menstruation, scanty, occurring every twenty-four days. She had been troubled with cold hands and feet. Since marriage she had had pains in the back in the lower lumbar region and pain and soreness in the right ovarian region. When I saw her she had been taken with cramps some time before. There was severe hemorrhage; otherwise she was comfortable. She had been menstruating regularly and did not know that she was pregnant. She was taken to the hospital and curetted. A fetus corresponding in size to a three months' pregnancy was removed. After the curettage she was in good condition, considering the amount of hemorrhage she had had, for about twelve hours; then she suddenly developed symptoms of internal hemorrhage and died before I could reach the hospital. At necropsy the outer end of the right tube was found converted into a sac which had ruptured and a 3-months-old fetus was lying in the clot of blood. N. L. I.

ANSWER.—The symptoms of ectopic pregnancy and abortion are quite similar, and the differential diagnosis should be carefully made in all cases in which abortion is suspected. Failure to observe this rule has frequently led to curettements or other operations for incompleted abortions when the condition was a tubal pregnancy. Curettement of the uterus with a pregnant tube generally leads to rupture of the tubal sac with serious or immediately fatal results. The possibility of the coexistence of an extra-uterine and an intra-uterine pregnancy makes care in diagnosis and caution in treatment all the more necessary.

Careful bimanual examination should reveal a tubal sac or make its existence suspected. Any suspicion of an ectopic pregnancy is a contra-indication to a curettement. If the diagnosis is not sufficiently certain to warrant a laparotomy, the patient should be kept absolutely quiet in bed until certainty can be reached.

In a case like the one reported, when the curettement for a uterine abortion is undertaken, it should be possible to diagnose the condition of the adnexa while the patient is anesthetized. Failure to do so would suggest that the bimanual examination before or during the operation was neglected, and this would indicate a faulty technic. Manipulating a curet while holding the cervix only with a volsellum forceps is dangerous. The fingers should be used as the curet whenever possible, and this can be done only by pushing down the uterus from above over the finger in the cervix. When the cervix is insufficiently dilated this will not succeed, and the curet must be used. Always, however, the size, position and consistency of the uterus must be determined by bimanual examination. With such an examination, having the patient anesthetized, it should be impossible to overlook a tubal sac as large as that in the case reported.

TECHNIC OF BLOOD EXAMINATION FOR SUGAR

To the Editor:—I have read with interest the leading editorial, "The Sugar Content of Human Blood," in THE JOURNAL (April 19, 1913, p. 1228). As I have at present both time and inclination, I should like to follow this matter up in my own little laboratory—one that I have just fitted out. Can you tell me where I may find the details of the technic in English? Or might it not be worth your while to publish the technic in THE JOURNAL, as perhaps others, too, would like to see it?

ROBERT E. WHITE, M.D., Oshkosh, Wis.

ANSWER.—The blood is examined for sugar in the same manner as urine, but owing to the small amount present more delicate methods should be chosen and the protein constituents must be removed before the test is made. The more recent methods of removing proteins are by means of colloidal iron with the addition of sodium sulphate or the use of iron alum. The following is given by Cambridge in his recent work on glycosuria:

A weighed and measured quantity of blood is freed from albumin by boiling with sodium sulphate, and filtering. The precipitate is well washed, and the quantity of sugar in the filtrate is estimated. A certain amount of sugar is carried down by the precipitate, and unless the blood is quite fresh the action of the glycolytic ferment may cause serious error.

For clinical purposes the sugar in the peripheral bloodstream may be estimated by collecting 5 c.c. and at once mixing it with 100 c.c. of absolute alcohol, filtering off the precipitate, washing with hot water several times, evaporating the combined filtrates on a water-bath to about 0.5 c.c., and estimating the sugar in this. The estimation may be carried out by titration with alkaline safranin, or by Lohenstein's saccharimeter. If a large amount of blood is available, titration with Fehling's solution, etc., or polarimetry, may be employed.

Wacker has described a colorimetric method by which it is said that sugar can be accurately estimated in such small quantities of fluid as 0.3 or 0.4 c.c., with an error of but 0.01 per cent. The protein of the blood is removed with iron alum and sodium carbonate. To the filtrate phenylhydrazin-p-sulphonic acid and sodium hydroxid are added, and the red color is compared with a color scale made with the same reagent and a standard solution of dextrose. The figures given for normal blood by this method are higher than those found by previous observers.

The following method is described by J. J. R. Macleod in his work, "Diabetes: Its Pathologic Physiology":

A great improvement over older methods has recently been introduced by Rona and Michaelis, who have shown that the proteins of blood, but none of the sugar, can be precipitated by shaking the laked and diluted blood with colloidal ferric hydroxid (dialyzed iron), and then adding a small amount of an electrolyte, such as sodium sulphate.

CALCIUM HYPOCHLORITE IN WATER PURIFICATION

To the Editor:—When was calcium hypochlorite first used in the treatment of a water-supply?

W. A. WOMER, M.D., New Castle, Pa.

ANSWER.—Although hypochlorite had been used as an emergency measure at Maidstone, England, in 1897, the calcium hypochlorite treatment as a practical process dates from 1908, when it was used by Mr. G. A. Johnson of New York for water purification at the Chicago Stock Yards. Previous attempts to purify the water of Bubbly Creek by a process of filtration in connection with the use of copper sulphate had been only partially successful. As the result of a lawsuit brought by the City of Chicago against the Union Stockyards Company, chlorinated lime (chlorid of lime) was substituted for the copper sulphate by Mr. Johnson's advice. The amount of chlorinated lime used was 45 pounds per million gallons, and this treatment reduced the number of colon bacilli in the sewage-laden water of Bubbly Creek below the number found in the Chicago city water-supply. Soon after the spectacular success of the Bubbly Creek experiments Mr. Johnson introduced the treatment for the water of the Boonton Reservoir at Jersey City and since then the method has been widely applied.

LIST OF FOREIGN PUBLICATIONS

To the Editor:—Where can I find the names and prices of foreign medical journals? Your American Medical Directory gives an excellent list of those in the United States and Canada, and I find the names of many foreign ones in your Current Medical Literature Department, but not the price. P. R. S.

ANSWER.—A good list of foreign medical journals, with prices and places of publication, is now appearing in our "Guide to Current Medical Literature"—a pamphlet containing the semi-annual index of THE JOURNAL and other matter to fit it for use as an index medicus. This guide is issued twice a year at 50 cents a copy.

THE PURSUIT OF EMPTY HONORS—THE ITALIAN PHYSICO-CHEMICAL ACADEMY

To the Editor:—I have received a notice of nomination to the Académie Physico-Chémique Italienne, located at Palermo, Italy, and before signifying my acceptance, would like to know the standing of this society. Please give me the desired information.

W. A. SHEPHERD, M.D., Richmond, Va.

ANSWER.—This fake "scientific" organization—one of a number of foreign diploma-mills—was discussed in THE JOURNAL, Oct. 21, 1911, pp. 1373 and 1380, and March 8, 1913, p. 770. We congratulate our correspondent on his caution in writing us. We fear, however, that not all members of the profession are so careful.

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IS CASTOR OIL AN OXYTOCIC?

To the Editor:—About twenty years ago I was told by an old negro midwife, if I wanted my labor patients to have an easy time during confinement, to give them castor oil every day for a few days before the expected event. Later I saw a short note in some medical publication, the name of which I cannot recall, stating that castor oil made labor easier.

In the seventh edition of Hare's "Practical Therapeutics," published in 1898, is found the following: "Previous to parturition it [castor oil] has been largely used to relieve the bowels of fecal matter, and is said by old practitioners to make labor easier than if any other purge is used."

After reading what Hare said about castor oil I began to give to all pregnant women coming under my care the following instructions about taking it: If they wished to have an easy time during labor, they should begin about two weeks before the expected time and take 2 teaspoonfuls of castor oil on retiring at night, and on the day labor began they should take 2 tablespoonfuls. Very few refused to take it. It was noticed, particularly in first labors, that the first stage was very short, the cervix rapidly and painlessly dilating. A more extended experience since confirms this action of castor oil. In first labors the cervix is frequently found fully dilated in from one to three hours.

ST. CLOUD COOPER, M.D., Fort Smith, Ark.

ANSWER.—The popular opinion expressed by our correspondent to the effect that castor oil given before parturition will make labor easier is noticed by Hare, it is true, but not at present with approval. We have not been able to consult the seventh edition of Hare's "Therapeutics," but in the ninth and following editions the quotation is not complete. The statement in full is as follows: "Previous to parturition it has been largely used to relieve the bowels of feces and is said by some practitioners to make the labor easier than when other purge is used. This is doubtful."

The National Standard Dispensatory (Hare, Caspari and Rusby) says: "The idea that it [castor oil] decreases the severity of labor more than any other purge, if given previous to parturition, is erroneous."

The experience of our correspondent has been very favorable and apparently differs from that of others. In drawing conclusions from such observations we should consider: (1) that a large number of cases must be observed in order to make conclusions safe; (2) the psychic impression on the woman and the personal equation of the physician must be taken into consideration. Castor oil, on account of its mildness, is used much more frequently in pregnancy than other cathartics. Without doubt it may do good when judiciously used, but it should not be relied on as oxytocic. The cleansing of the bowel may have had something to do with the ease of labor in the cases observed.

A CASE SUGGESTIVE OF CREEPING ERUPTION

To the Editor:—I wish to report the following peculiar case: The patient is a healthy and particularly robust woman. About six months ago he felt a burning sensation in the inguinal region and on examining the skin he found a red streak 1½ inches long and 1/16 inch wide. One end of the streak was 2 inches above the pubis and that distance from the median line, and followed a crooked course diagonally outward. When I saw him about three months ago, the red streak was ¼ inch wide and 4 inches long. At present a depression can easily be felt on passing a finger over the red streak, but the epidermis does not fall into the cavity. The cavity is as wide as the streak, apparently as deep as the thickness of the skin, and as long as the streak. To the finger it feels as if a goose-quill could easily be put into the cavity. There seems to be no fluid underneath, but the epidermis looks as if something had burrowed beneath it. There is no involvement of the lymph-nodes, although the streak appears as if it had followed the course of a lymphatic. There has never been any sore to indicate a point of infection. There is no tenderness and the patient has experienced only the slightest sense of heat or burning. Three months ago the same symptom set up on the opposite side, and recently another line has started about an inch from the first and parallel with it. At present the earlier two lines are about 4 inches long. It seems to take about three months for them to become as large as the largest and they seem to be growing a little wider. When the epidermis is raised directly over, or including, the red streak, it presents the same appearance as epidermis of other parts, only it is pink.

J. L. TRACY, M.D., Toledo, Ohio.

ANSWER.—The account given strikingly suggests a case of creeping eruption. This condition is said to be due to the larva of a dipterous insect of the genus *Gastrophilus*. The larva is said to be located a quarter of an inch in advance of the active part of the line and in the cases reported it has advanced at the rate of an inch or more a day. In this respect the case described by our correspondent appears to be peculiar in its slow progress. Some observers have failed to find the larva. According to Sampson-Himmelstjerna the larva may be seen with a hand-glass as a black speck by pressing the blood out of the part with a flat glass. The wanderings of the larva have been known to continue for over two years. After a time the color of the skin fades out. The rational treatment is to destroy the larva, but hypodermic injections of antiseptics have usually failed to kill it. Hutchins suggests first the injection of cocain solution followed by the injection of one or two drops of chloroform, the needle being inserted behind and pushed forward in the burrow to the probable location of the parasite.

Cauterizing the area just in advance of the end of the line or excising it has been recommended. Stelwagon succeeded by cataphoretic application of a solution of mercuric acid, 2 grains to the ounce combined with the application of a drop of nitric acid to a point just beyond the end of the line, a point which he found with the aid of a magnifying glass.

LITERATURE ON THE SEPTIC TANK AND SEWAGE-DISPOSAL PLANTS

To the Editor:—I want information relative to the success, efficiency and practicability of septic tanks or sewage-disposal plants. Can you refer me to sources of authoritative information? I shall appreciate any help you may be able to give me.

G. F. AMBROSE, El Dorado, Kan.

ANSWER.—The following should prove of value:

Baker, E. F.: Sewage Disposal: The Septic Tank, *Ill. Med. Jour.*, September, 1907; abstr., THE JOURNAL, June 22, 1907, p. 2150.
Morre, G. T.: Sewage Purification by Septic Tank and Chemical Precipitation, THE JOURNAL, Aug. 24, 1907, p. 677.
Holmes, B.: The Septic Tank in Sewage Disposal, *Lancet-Clinic*, Nov. 13, 1909.
The Septic Tank, editorial, THE JOURNAL, Dec. 10, 1910, p. 2067.
The Rise and Fall of the Septic Tank, editorial, THE JOURNAL, Nov. 5, 1910, p. 1650.
The Septic Tank, correspondence, THE JOURNAL, March 11, 1911, p. 761.
The Septic Tank, editorial, THE JOURNAL, Feb. 4, 1911, p. 355.
Booker, W. H.: Residential Sewage Disposal Plants, *Texas State Board of Health Bulletin*, September, 1912.
Baker, M. N.: Sewage Purification in America, 1893.
Dibden, W. J.: Purification of Sewage and Water, ed. 3, 1903.
Morse, W. F.: Collection and Disposal of Municipal Waste, 1908.
Raikes, Hugh P.: Design, Construction and Maintenance of Sewage-Disposal Works: Being a Practical Guide to Modern Methods of Sewage Purification, London, Constable, 1908.
Cosgrove, J. J.: Sewage Purification and Disposal, Standard Sanitary Manufacturing Company, Pittsburgh, Pa., 1909.
Trentham, W. H., and Saunders, James: Modern Methods of Sewage Disposal: a Practical Handbook for the Use of Members of Local Authorities and Their Officials, 1909.
Folwell, A. Prescott: Sewerage, the Designing, Construction and Maintenance of Sewerage Systems, 1910.
Watson, Hugh S.: Sewerage System, 1911.
Gerhard, W. P.: Water Supply and Sewage Disposal of Country Homes, published by Van Nostrand Co., New York, price, $2.
Fuller, G. W.: Sewage Disposal, published by McGraw-Hill Book Company, New York, price, $6 (reviewed editorially in THE JOURNAL, Aug. 3, 1912, p. 372).

REACTION FOR ALBUMIN IN THE SPUTUM

To the Editor:—Please give information on the albumin reaction in the sputum, its value and method of using it, or tell me where I can find it.

ALBERT S. BARR, M.D., Greenville, Mich.

ANSWER.—The reaction for albumin in sputum is made by the ordinary tests for albumin in the urine. The diagnostic importance depends on the fact that albumin is most commonly found in pneumonia and in pulmonary tuberculosis. A negative finding was thought at one time to be sufficient to exclude tuberculosis. Several authors, however, have shown that albumin may not be present in the sputum of true pulmonary tuberculosis. It is frequently seen in benign affections, especially if the sputum contains occult blood. The presence of albumin should therefore be considered as only confirmatory of other tests.

The following literature may be referred to:

Gantz, M., and Hertz, R.: Differential Importance of Albumin in Sputum, *Presse méd.*, Jan. 18, 1911; abstr., THE JOURNAL, March 4, 1911, p. 702.
Roger, H.: Albumin Reaction in Sputum, *Bull. de l'Acad. de méd.*, April 11, 1911; abstr., THE JOURNAL, May 27, 1911, p. 1619.
Ferreira, C.: Albumin Reaction in Sputum in Early Diagnosis of Tuberculosis, *Presse méd.*, April 19, 1911; abstr., THE JOURNAL, May 27, 1911, p. 1621.
Roger, H., and Lévy-Valensi: Albumin Reaction in Pulmonary Tuberculosis, *Presse méd.*, May 20, 1911; abstr., THE JOURNAL, June 24, 1911, p. 1908.
Lévy-Valensi, J.: Albumin Test in Tuberculosis, *Med. Press and Circular*, May 15, 1912; abstr., THE JOURNAL, June 22, 1912, p. 2002.
Fullarton, R. S.: Albumin Reaction of Sputum in Pulmonary Tuberculosis, *Glasgow Med. Jour.*, July, 1912; abstr., THE JOURNAL, Aug. 17, 1912, p. 586.
Works, B. O.: The Quantitative Examination of Albumin in the Sputum in Pulmonary Tuberculosis, THE JOURNAL, Oct. 26, 1912, p. 1537.
Pindberg, J.: Albumin in Sputum, *Hospitalstid.*, Oct. 23, 1912; abstr., THE JOURNAL, Nov. 30, 1912, p. 2014.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

LAWS PROHIBITING FRAUDULENT ADVERTISING

Bills have recently been introduced in various states to prohibit the advertising of treatment for certain diseases. As was shown in THE JOURNAL, last week, this is in accordance with the general trend of the times. From an early day nearly all the states have sought to control, if not absolutely to suppress, such advertising.

Legislation for this purpose may be divided generally into two classes. In the first of these, the state forbids this type of advertising, enforcing compliance with its mandate by criminal prosecution. In the second, the same result is attempted by authorizing a revocation of license, either directly by the board of medical examiners acting in a quasi-judicial capacity, or by the board acting as a relator before a court of competent jurisdiction.

These laws have gone through a process of evolution. At first the enactments simply permitted a revocation of license for "dishonorable or unprofessional conduct," adopting a phrase familiar to physicians and thereby forbidding all acts which would be included under such a definition. The courts seemed a little dubious as to the construction of the phrase; consequently an attempt was next made to define "unprofessional conduct" specifically. Finally, the state stepped in and made certain acts misdemeanors, thus in some jurisdictions seemingly allowing two punishments for the same offense.

Examination of the statutes of the several states shows that the laws at present represent all three of these stages. As an illustration of the first class, the laws of Alabama, the District of Columbia, Indiana, Louisiana and Maryland[1] may be taken. These five statutes, while not exact duplicates of each other, are sufficiently similar in effect to be grouped together. All permit a revocation of a license for "unprofessional conduct," this being the only term used under which a physician might be held for "advertising." These early laws made no attempt to limit the offense strictly. Apparently at the time these laws were adopted, the spirit of commercialism and the desire to amass great wealth were not so prominent; consequently the general spirit of the profession was sufficient to control this tendency. The early cases show not a few prosecutions of empiricists and fraudulent herb-doctors.

The next step came in due time. The existing laws of Illinois, Iowa, Kentucky, South Carolina, New Mexico, New York and Texas[2] would seem to indicate a desire to define fraud more accurately. These laws speak of "false or fraudulent representations";[3] "likely to deceive or defraud the public;"[4] "convicted of illegal practice;"[5] "who offers . . . . to violate any provisions of Sect. 318;"[6] "conduct of a character likely to deceive or defraud the public."[7] This language is capable of a broad construction and would seem quite sufficient to warn the man of average intelligence that fraud and deceit is unprofessional conduct. And yet in Matthews vs. Murphy[8] the court holds the language of the Kentucky statute given above quite insufficient. "The statute does not advise the physician in advance what act or acts may be in violation of its provisions," says the court. Again, "As the statute does not advise him beforehand as to what is unprofessional conduct he could not knowingly or intentionally be guilty of it." Forsooth! Every physician knew and knows the meaning of "unprofessional conduct" as well as a merchant knows his "negotiable instruments." To declare a statute of this nature, or a portion of it, unconstitutional because the primal rules of pleading cannot be complied with is *reductio ad absurdum*. This case is not a precedent and has been relegated to oblivion whenever cited.

Whether or no these laws be constitutional is one question; the result produced under them is quite another. The growth of commercialization, the rapid strides which medicine has taken, the influx of large numbers of poorly trained men into the profession each year, and, most important of all, the development of this field by unscrupulous business men, all seemed to require legislation of a more repressive character. Oklahoma, Nevada, North Dakota, Tennessee, Utah, Washington and Wisconsin all evidence this type of legislation.[9]

These statutes were aimed specifically at advertising and all permitted the board of medical examiners or other authorities to revoke a license on practically the same grounds. These are:[10]

1. Conviction of felony or crime[11] involving moral turpitude.

2. Negligent or ignorant malpractice resulting in permanent injury or death of a patient.

3. The obtaining of a fee either directly or indirectly either in money or in the form of anything of value or in the form of financial profit either as a personal compensation or as compensation, charge, profit or gain for an employer or any other person or persons on the representation that a manifestly incurable, sick, diseased or injured condition of any person can be permanently cured.

4. Causing the publication, circulation, exhibition or display, publicly, of an advertisement, notice or information of any medicine or means whereby the monthly periods of women can be regulated, or the menses, if suppressed, can be reestablished, or whereby abortion can be accomplished.

5. Causing the publication, circulation, exhibition or display publicly of any advertisement relative to the treatment, alleviation, palliation, cure or prevention of any disease, weakness or condition of the sexual organs.

These laws, failing either in that they were too sufficiently specific, or because the administration thereof was somewhat lax, pointed the way for the statutes of Colorado, Minnesota and Wisconsin and to the bills submitted to the present legislatures in Illinois, Ohio and Oregon.[12]

The idea dominating these laws is to make the act of advertising certain diseases or methods of treatment in any manner, in any periodical, excepting perhaps medical journals and the like, and the publishing of such advertising, a misdemeanor, and affixing a penalty of either $100, or a jail sentence of six months, or perhaps both. The Minnesota law provides that the advertising shall *per se* constitute a prima facie case against the accused, thereby shifting the burden of proof; and the Colorado statute stipulates that the act of the agent in the general scope of his employment is the act of the principal. The Wisconsin statute is worthy of notice because of its careful wording and the moderate penalty. It is submitted that wrong conduct is not always prevented by reason of a heavy fine; rather certainty of punishment is the more to be desired in drafting these measures. To that end the statute must so read that the indictment can describe a definite act forbidden; this done the charge and the proof will the more readily and nearly conform. The fault with a vast number of such measures is that the prosecutor cannot lay an indictment under them with any degree of certainty.

The bill introduced in Illinois may perhaps be criticized for these reasons, and also perhaps that it does not go quite far enough. The idea embodied in the draft is highly commendable, but such laws must be capable of quick results. The bill must be so drafted that a motion to quash an indictment drawn under it cannot be sustained, or its constitutionality questioned on the ground of uncertainty; the finished law must be one that can be economically enforced by the state.

The Illinois bill, the latest effort to regulate objectionable advertising, is brief and simple. The text follows:

SECTION 1. Whoever shall advertise in any newspaper, publication, magazine, periodical, pamphlet or by circulation or form letter, or cause to be distributed any advertisement in any form whatsoever, to restore manly vigor, treat and cure lost manhood, stricture, varicocele, hydrocele, diseases of the

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genito-urinary organs, or any venereal disease, or to cure cancer or tuberculosis, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding $100 or by imprisonment not less than one month nor more than six months, or both.

SECTION 2. Any owner or managing officer of any newspaper, publication, magazine or periodical in whose paper shall be printed or published such advertisement as is described in this act shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding $100 or by imprisonment not less than one month nor more than six months, or both.

REFERENCES

1. Ch. 39 Ala. Code, Art. 1, Sec. 1637; P. A. of D. C., No. 174, Sec. 10; Ind. L. A., 97, p. 255, Sec. 5; M. P. A. La., Act 49-244-16 of 1894, 1908, 1912, Sec. 15; Md. L. Art. 43, Sec. 65.
2. R. S. Ill. M. P. A., Sec. 6; Ch. 17, Tit. 12 Iowa Sec. 2578; Ky. M. P. A. Sec. 11; S. C. M. P. A. Sec. 5 A; N. M., M. P. A., Sec. 6; Ch. 344 N. Y., Par. 11; Tex. M. P. A Sec. 12.
3. Ill. M. P. A. Sec. 6.
4. Ky. M. P. A. Sec. 11.
5. So. Car. M. P. A. Sec. 5 A.
6. Ch. 344 N. Y. Code, Par. 11.
7. Texas M. P. A. Sec. 12.
8. 23 Ky. 750; 63 S. W. 785, 54 L. R. A. 415.
9. Okla. S. B. 189, Sec. 13, approved June 10, 1908; Nevada M. P. A. Sec. 12; No. Dakota M. P. A. Sec. 11; Ch. 78 Tenn. Sec. 15; Ch. 93 Utah Sec. 1735; Ch. 192 Wash. Sec. 144; Ch. 196 Wis. Sec. 1436, *e. t.*
10. North Dakota M. P. A. Sec. 11.
11. *Sic* in original; "felony or misdemeanor" is suggested as more accurate.
12. Colorado H. B. 150 approved April 3, 1907; Ch. 162 Minn. Acts 1909; Ch. 156 Wis. laws 1907, Sec. 4590 u; Senator Hurburgh's bill, Ill. Leg. April 24, 1913; Oregon S. B. 360; Ohio H. B. 51.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, MINNEAPOLIS, JUNE 17-20

American Academy of Medicine, Minneapolis, June 13-15.
Amer. Medico-Psychological Assn., Niagara Falls, Can., June 10-13.
American Proctologic Society, Minneapolis, June 16-17.
Arizona Medical Association, Globe, May 20.
Arkansas Medical Society, Little Rock, May 20-23.
Connecticut State Medical Society, Hartford, May 21-22.
Florida Medical Association, Miami, May 13-15.
Illinois State Medical Society, Peoria, May 20-22.
Maine Medical Association, Portland, June 25-26.
Massachusetts Medical Society, Boston, June 10-11.
Missouri State Medical Association, St. Louis, May 13-15.
Montana State Medical Association, Great Falls, May 14.
Nebraska State Medical Association, Omaha, May 13-15.
New Hampshire Medical Society, Concord, May 13.
New Jersey Medical Society, Spring Lake, June 10-12.
North Carolina State Medical Society, Morehead City, June 17.
Oklahoma State Medical Association, Enid, May 13-15.
Rhode Island Medical Society, Providence, June 5.
South Dakota State Medical Association, Vermilion, May 27-29.
West Virginia State Medical Association, Charleston, May 21-23.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Seventh Annual Meeting, held at Rochester, April 28-30, 1913

The President, DR. JOHN F. W. WHITBECK, Rochester, in the Chair

The one hundred and seventh annual meeting of the Medical Society of the State of New York was held in Rochester, April 29-May 1, and for the first time in its history, outside of Albany. New York was selected as the place for holding the next annual meeting.

The following officers were elected: President, Dr. William Francis Campbell, Brooklyn; vice-presidents, Dr. W. Stanton Gleason, Newburgh; Dr. G. F. Blauvelt, Nyack, Dr. Myron B. Palmer, Rochester; secretary, Dr. Wisner R. Townsend, New York (reelected); treasurer, Dr. Alexander Lambert, New York (reelected); delegates to the American Medical Association, Dr. H. L. Elsner, Syracuse; Dr. Floyd M. Crandall, New York; Dr. A. E. Vander Veer, Albany; Dr. Wesley T. Mulligan, Rochester; Dr. S. W. S. Toms, Nyack; Dr. John O. Polak, Brooklyn; alternates, Dr. J. M. Lynch, New York; Dr. H. T. Furniss, New York; Dr. Charles A. Wall, Buffalo; Dr. J. C. MacEvitt, Brooklyn; Dr. T. H. McKee, Buffalo; Dr. G. E. Davis, New York.

Some Needed National Legislation

DR. JOHN F. W. WHITBECK, Rochester: Owing to the magnitude of the interests of the state of New York in its financial and populous importance, it does not seem unreasonable that this state, situated as it is, furthermore, near the federal capital, should essay to exert a potent influence on the acts of Congress in many, if not all, of the great and vital affairs of the whole people of the nation. For example, our House of Delegates, Jan. 22, 1910, passed a resolution urging Congress to authorize a Bureau of Public Health. Although Congress has not seen fit to establish a Department of Health, it is desirable that there should be one and that the enlargement of the powers of the Public Health Service, a department of the Treasury, is not enough. If the federal government could be persuaded that the highest interests of 90,000,000 inhabitants of the United States demanded an organization of a veritable national Department of Health, we should have a Secretary of Health, whose expert knowledge of the requirements and whose undivided attention to the administration of such a department, divested of pernicious political policies and the interference of "special interests," would definitely provide for a needful and efficient regulation of pure food and pure drug laws; a Division of Purification of Water-Supplies; a Division of Nutrition; a Division for the Study and Prevention of Accidents and Diseases of Industrial Workers; a Division of Vital Statistics; a Division of Education for the People in the Control and Prevention of Diseases. Then, too, we should have an adequate national chemical laboratory to solve many of the vexed problems of national importance. As has been stated, all of these divisions would come under one department, and would be under the supervision of one secretary, and would not be, as now, scattered among several departments with such a diversity of interests as should make the highest efficiency impracticable if not quite out of the question.

Pain and Other Clinical Manifestations of Myocarditis

DR. ALEXANDER LAMBERT, New York: We must fall back on the clinical observations of the different forms of myocardial degeneration that are most likely to occur with certain of the general diseases, and to estimate from other signs and symptoms than by the graphic method what is the form of myocarditis present. Cardiac pain is a much earlier symptom in cardiac disease than is generally believed. The majority of physicians do not pay much attention to precordial pain unless it radiates down the left arm; then they believe it is due to some form of angina, and if the patient does not have attacks of breathlessness, or does not drop down with it, they are prone to call it pseudo-angina, especially if it occurs in women. The most frequent position of pain is between the fourth and sixth ribs over the pectoral muscle near the nipple. This area is the one in which there is frequent tenderness, but frequently the hypersensitiveness of the skin and the hyperalgesia remain for a day or two after the actual pain has ceased. It is not uncommon for pain in the left wrist to be treated as gout or rheumatism which, in reality, is the first expression of myocarditis. Shortness of wind is one of the early signs of myocardial degeneration.

The Symptoms and Diagnosis of Involvement of the Heart in Syphilis

DR. HARLOW BROOKS and DR. JOHN H. CARROLL, New York:

1. Symptoms of cardiac involvement are manifested in a large percentage of cases of syphilis. 2. The symptoms of luetic heart disease may appear very early in the secondary stage, though most frequently not discovered until the tertiary period, largely because the patient attributes all his symptoms to the general disease, and special visceral signs are neglected. 3. The signs are those of an essential cardiac lesion, but differ from those idiopathic or simple cardiac cases in that there is here a greater tendency toward the involvement of the heart muscle and the coronary arteries. 4. Precordial pain is probably the most constant symptom, and one of the earliest. In a high percentage of cases this takes on a definitely anginal character. 5. Dyspnea, cyanosis and other usual signs of heart incompetence are customarily present long before true incompetence is evident. 6. In so far as the endocardium is concerned,

the greatest number of cases show combined mitral and aortic lesions; after these those of the aortic ring predominate. 7. Recognition depends primarily on the diagnosis of lues and on the association of a cardiac defect either of definite or supposititious nature. 8. The recognition of the nature of the general infection depends on the Wassermann reaction, the presence of associated lesions of a probable syphilitic nature, and finally on the history of this infection or of symptoms or signs indicative of it. 9. The most conclusive and important diagnostic test is the therapeutic test. 10. Recognition of the cardiac complication as probably luetic is best accomplished by the primary elimination, when possible, of other probable etiologic causes; by the early manifest tendency in luetic instances toward involvement of the myocardium and arteries; by associated arterial change, and finally by improvement or disappearance of the cardiac symptoms and signs under specific treatment.

Selective Drug Action on the Nervous System as an Aid to Diagnosis

DR. NELSON G. RUSSELL and DR. CARROLL J. ROBERTS, Buffalo: The so-called animal nervous system, which supplies the organs of sense and all voluntary muscles, is to be distinguished from the vegetative system, which supplies the smooth muscle of viscera, certain cross-striped muscle and the secreting portion of glands. The vegetable system is further divided into the sympathetic and the autonomic systems. The autonomic system is made up of a cranial portion, a bulbar portion and a sacral portion. Owing to the importance of the vagus, the chief nerve of the system, the autonomic system is also called the extended vagus, and the study of the drug reactions of this system is called vagotonic. The organs mentioned have two sets of nerve fibers which are physiologically antagonists, and a balance is theoretically necessary for the normal functions of the organs to be carried on. Each system is acted on selectively by certain drugs. Thus pilocarpin acts as an irritant to the autonomic system and produces the same effects as electric stimulation. Atropin acts as a depressor of the autonomic system and counteracts the effects of pilocarpin. Epinephrin stimulates the sympathetic system, but as yet we do not know of a drug that has a depressing action on the sympathetic system. Pilocarpin might in certain susceptible individuals produce, through stimulation of the autonomic system, certain symptoms, and one so susceptible is called a "vagotoniker." According to Eppinger and Hess of Vienna, many of the so-called cases of hysteria and neurasthenia, and the neuroses are, as a matter of fact, due to irritability of the autonomic system, and they support their claims by abundant clinical proof. The method of procedure carried out in the investigation of cases is described. The practical application of the facts learned from a positive reaction is that any symptom produced by an injection of 0.01 gm. of pilocarpin, referable to an irritable autonomic system, would be relieved by atropin, the depressor of the autonomic system, and a case is reported to illustrate this point.

Cardiac and Arterial Decompensation; Prevention and Treatment

DR. LOUIS F. BISHOP, New York: The treatment of broken compensation with uncomplicated valvular disease in young persons requires a study of its cause, which is often enough found to be muscular strain that has been out of proportion to the power of the crippled heart, particularly when there has been dissipation. Prolonged rest may be necessary, and sometimes the occasional use of digitalis is required. The diet should be liberal, and the auxiliary use of iron, arsenic and strychnin as a tonic is allowable if there is true anemia or nervous depression.

The treatment of broken compensation in combined cardiac and arterial disease, which corresponds closely to secondary low blood-pressure, which I have so often described in previous communications, is the most serious problem in cardiovascular disease. The condition develops after years of compensatory life, and the sufferer presents dilatation of the heart with feeble valvular orifices and pathologic relaxation of the blood-vessels causing dropsy, edema of the lungs, congestion of the liver, impaired cerebral circulation and partial paralysis of the kidneys. In this condition, persons are always highly sensitive to many proteins, even often to the proteins of milk. Secondary low blood-pressure is always present, though, at times, the blood pressure measurement is misleadingly high on account of local vascular spasm. Unfortunately, they often come to the specialist's notice when the situation has been complicated by the liberal, but not always wise, administration of inappropriate drugs. The limits of this paper do not allow the full discussion of so serious a condition. The principles of treatment in my own hands involve the thorough cleaning up of the intestinal condition by the administration of at least an ounce of castor oil on three successive occasions at intervals of forty-eight hours; by the thorough digitalization of the heart; by the withdrawal, at first, from the diet, of eggs, fish, meat and soups, and, in a large measure, of milk; allowing bread and butter, vegetables and cereals; and as soon as possible, the commencement of graduated exercise, leading up to as much of an outdoor life as possible, and gradually to a more liberal diet.

DISCUSSION

DR. HUBERT SCHOONMAKER, Clifton Springs: As to the effect of the internal secretions on the circulation, we have come to recognize the "thyroid" heart. To make a diagnosis of cardiac neurosis, neurasthenic heart, or gastro-intestinal reflex, or what not, does not mean much. If we could recognize at the outset the cardiac condition or the thyroid condition, we could take care of the patient in such a way that, in all probability, exophthalmic goiter would not develop. Every internist should recognize in the face of cardiac arhythmia, and particularly in cardiac palpitation, which is at all persistent, the probability of disturbance of the heart due to abnormal internal secretions and possibly hyperthyroidism.

DR. BENJAMIN STEARNS, Unadilla: Dr. Lambert in speaking of pain recalls a patient I had a number of years ago who had typhoid. He was convalescing, when one afternoon he was taken with a severe pain in the hip, radiating to the left side, and before I reached the house he was dead. This was six weeks following typhoid. The poison not being entirely eliminated from the system caused the severe pain that produced paralysis of the heart and sudden death.

DR. E. NEUHOF, New York: I cannot agree with Dr. Lambert that pain in most of these cases is due to changes in the myocardium. I have seen similar conditions in children with acutely dilated hearts, in whom the main lesion was endocardial. I have made a study of twenty-odd cases of arterial fibrillation, and the first symptom was dyspnea.

DR. HENRY STARK, New York: In most instances in which these patients complain of pain, there is also dyspnea. It is one of the first symptoms. Pain in the precordial region, although attended by heart symptoms, may afterward be proved to be due to disease in connection with some other organ or tissue or bone than the heart.

(To be continued.)

MISSISSIPPI STATE MEDICAL ASSOCIATION

Forty-First Annual Meeting, held at Vicksburg, April 7, 1913

(Concluded from page 1391)

Pregnancy Following Double Ligation and Division Between Ligatures of Both Tubes

DR. F. D. SMYTHE, Memphis: Both tubes were divided and the distal ends anchored in the anterior layers of the broad ligaments. The operation was done June 9, 1910, and the woman was delivered of a 6½-pound baby Nov. 12, 1911, and is again pregnant.

DISCUSSION

DR. J. W. BARKSDALE, Winona: Dr. Smythe's paper is important from a sociologic point of view. The sterilization of the insane and criminals has come to receive a good deal of attention at the hands of the legislative bodies of our states, and it is a question which will be dealt with in some way or another at no very remote time. It is interesting to note in how many experimental cases conception has followed attempts at the sterilization of animals. I read within a year a report of the commission of Iowa with reference to the sterilization of criminals and insane, with a series of experiments done on dogs, in which every known operation was

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done, except to remove the ovaries; and I think that in fully 80 per cent. of the cases conception occurred. The operation is one which in human beings is followed by pregnancy in at least 30 per cent. of the cases.

DR. C. J. MILLER, New Orleans: I think this can be explained from two different points of view, the physiologic and the pathologic. We know now of the transmigration of the ova, and that after most operations intended to accomplish sterilization, conception will again take place. I think in these cases a wedge-shaped portion of the fundus above the top of the uterus can be removed, and if you remove a portion of the tube going through the wall, you will not have pregnancy following. In those cases in which you want to be doubly sure you can bury the ovaries by splitting the broad ligament and placing the ovaries in the pocket behind the peritoneum. I have not as yet seen any definite reports of the usefulness of the operation.

Treatment of Puerperal Eclampsia

DR. F. J. UNDERWOOD, Nettleton, called attention to the possibilities of preventing eclampsia, and emphasized the advisability of care of the pregnant woman. He then discussed the treatment of the eclamptic state, which he finds most successfully managed with large doses of veratrum.

DISCUSSION

DR. I. W. COOPER, Newton: I have found veratrum the most satisfactory drug to use. If it is used judiciously, and given in teaspoonful doses, we shall not have to bleed our patients very often.

DR. F. D. SMYTHE, Memphis: One obstetrician recommended teaspoonful doses of veratrum every hour until the pulse reached as low as 50 or 40, and he has not seen a patient have an eclamptic attack with the pulse at that stage. There is no reason to fear its toxic influence. Our first effort should be toward elimination of toxic material, and the most effective measure (especially does this apply to the obese) is phlebotomy. Next to that in importance is the rapid emptying of the uterus. Hypercatharsis should be brought about at once by the use of croton oil; and place patients with dry skin between warm blankets, and give a hypodermic of 1/8 to 1/6 grain of pilocarpin. The strongest point made in the doctor's paper is the importance of following up the treatment after delivery. It is on the careful watching and conscientious, intelligent application of therapeutic measures that our statistics so far as mortality of mother and child are concerned will depend.

DR. O. S. MCCOWN, Memphis: It is conceded that puerperal eclampsia is due to a toxemia of unknown origin, the result of pregnancy. This spends its force principally on the liver and kidneys, and nervous spasms result. Some time last year McPherson of New York reviewed the cases that had occurred in the Sloane Hospital, and the records showed that morphin gave about as good results as anything else. Many authorities advocate immediate emptying of the uterus at any cost, in whatever way seems to be indicated in the case at hand. There are others of equal prominence who advise letting the pregnancy go on and trusting to spontaneous delivery and to treating the patient. The bulk of testimony is rather against the use of chloroform or any of the chlorin products to control the convulsions, as the pathologic condition of the liver and kidneys in these patients is exactly the same as in case of death from chloroform poisoning.

DR. J. S. ULLMAN, Natchez: My first thought in a case of eclampsia is to relieve that convulsion. I do not measure the dose; I simply fill my hypodermic syringe, and if the patient does not improve soon, I give her another dose. My next thought is elimination, and I secure it with calomel—10, 20, 30, 60 grains—enough to do the work. Morphin does the very thing you do not want to do by tying up the liver. I had a case recently in which I used veratrum and calomel and obtained good results.

DR. J. W. MATTHEWS, Greenwood: I agree as to the value of the veratrum treatment, but when it is said that we must not use morphin, then I take issue. One of my patients was a negro woman aged about 18. She was having the most frightful convulsions I ever saw. I gave the woman ½ grain of morphin and 1/100 grain of atropin. The os contracted, but by the time I got my instruments ready there was a relaxation, and I delivered her all right. My only objection to the use of morphin is the consequent cessation of secretions, but I have always obtained good results from its use, and expect to give it again.

Drainage in Pelvic Abscess and Pyosalpinx

DR. F. M. SANDIFER, Greenwood, considered the indications and contra-indications for drainage, and described various methods.

DISCUSSION

DR. J. S. ULLMAN, Natchez: When there has been no rupture of the tube in taking it out, there is no reason to believe that pus has been spilled in any other portion of the abdomen. There is therefore no reason why a drain should be put in, and aside from the oozing, everything usually goes along without any trouble in these cases.

DR. F. M. SANDIFER, Greenwood: In all cases of pyosalpinx in which the temperature is normal at the operation, I never drain, even though I rupture a tube. Those patients will progress nicely. There is no increase of temperature under the operation. Under these circumstances a drain is contra-indicated.

DR. N. A. MCLEOD, Brookhaven: We are getting further from drains as the years roll by. I would be governed in cases of a ruptured abscess in which the peritoneum has been smeared over with pus, largely as to whether it was a recent affair or whether it had had pus in there for a period of time. In acute cases of recent origin, and with the formation of pus, I would not hesitate to drain.

Treatment of Hookworm Disease

DR. W. S. LEATHERS, University, gave some suggestions with regard to the diagnostic methods employed and the variation from the routine methods of treatment that is used in Kentucky. Two doses of salts are administered before the thymol, with a day intervening on which the patient ingests only liquids.

DISCUSSION

DR. MAY F. JONES, Hattiesburg: We have been treating a number of patients with hookworm at the State Normal. Thursday night at bedtime we give an ordinary dose of salts; Friday morning, at breakfast, a glass of milk; for dinner a bowl of soup, and for supper another glass of milk. Saturday the patient is required to stay in bed and at 6 a. m., we give a dose of 30 grains (in three capsules) of thymol; at 10 a. m. another 30 grains, and another dose of salts; at 1 p. m. the patient has had one or two free movements. Most of these patients have since been examined, and a very small percentage show infection remaining.

DR. C. C. BASS, New Orleans: In many of the writings suggesting treatment for the disease, the suggestion has been made that two purgations be given instead of one, say one each night, before beginning treatment on the third day. This treatment is well known to be productive of greater success than when the alimentary canal is not so thoroughly emptied. The most important point is that the alimentary canal should be thoroughly emptied. It seems to me that it would certainly promise better results if a second dose of salts were given on the night prior to the dose of thymol.

DR. W. A. DEARMAN, Long Beach: Considerable importance is to be attached to the way the thymol is administered. I have abandoned the use of thymol in capsules, because the capsule is not dissolved until it reaches the intestinal juices, and often the worms escape. I now give thymol in mucilage of acacia, followed by a glass of cold water. I usually give two doses of thymol—very little of it, but repeat it. The people should be impressed to wear their shoes. I have never seen the disease contracted except in a wet cow-lot.

Etiology of Pellagra

DR. W. A. DEARMAN, Long Beach: I induced pellagra in a monkey by feeding it some of the pseudomembranous deposit from the tongue, and some of the saliva, of a pellagrin. The monkey died, having presented symptoms of pellagra. From

observations and the post-mortem findings I consider pellagra a gastro-intestinal intoxication caused by a specific saprophyte that thrives on carbohydrates and gives rise to a peculiar toxin which causes the disturbances noted in skin and mucosa. In treatment I have had best success with arsenic.

Treatment of Pellagra with Opium: A Tentative Report

DR. J. W. GRAY, Clarksdale: I have treated and have reports on the treatment by others in fifty-nine cases. The results have been almost universally good. I administer from 5 to 30 drops of tincture of opium, three times a day, reducing the dose as soon as the symptoms begin to subside. I have not noticed the formation of a habit.

DISCUSSION

DR. W. T. MATTHEWS, Greenwood: I have had some experience with pellagra, altogether fourteen cases, and have used three treatments. Of the three I heartily endorse the opium treatment as used by Dr. Gray. I invariably start the treatment with thymol; I then follow with opium, and some times with chlorinated lime, and also calcium sulphid, with good results. But the patients treated with opium seemed to recover more quickly and with no symptoms of return, than did those when other treatments were used.

DR. T. M. DYE, Clarksdale: I treat my patients exclusively with opium, and clothes and stockings, and broad-brimmed hats to protect them from the sun. When a decrease of the dose of opium did not result in a decrease of the symptoms, I continued to increase the opium and gave castor oil for the constipation.

DR. E. R. GORDON, McComb City: We have patients who have not been given any treatment at all, and after a certain time the diarrhea seems to subside. Some of them have had recurrences in twelve months, and some of them have not. I have had some patients in whom opium did not control the diarrhea at all, but after a certain time it has naturally ceased.

Chronic Malaria and Malarial Relapse

DR. C. C. BASS, New Orleans, described the phenomena of the malarial paroxysm and those of malarial cachexia. The relapse is not due to segmenting parasites that escaped destruction by quinin, but to the sexual form of the parasite which is more resistant and which is the only form that can reproduce in the mosquito. The cycle is about seven days. Relapse after long interval is explained on the ground of acquired resistance on the part of the patient and consequent retardation of the development of the parasite. Another source of supposed relapse is reinfection. A patient may be reinfected by mosquitoes that he has himself infected during his original attack.

DISCUSSION

DR. R. M. DONALD, Hattiesburg: There is hardly a doctor who has not seen patients have recurrences of fever after taking quinin. In my section practically all malaria is of the tertian type; if there was ever a case of the estivo-autumnal affection, I have never seen it. I lived for a number of years in the Delta where the type of malaria is almost entirely estivo-autumnal, and I tried my best to break it up and often the patient would get hemoglobinuria and die.

DR. J. T. LONGINO, Jamestown: Dr. Bass advises 30 grains of quinin a day to cure malaria. I do not believe that it will take 30 grains, or that there is any form of malaria requiring this much if it is assimilated.

DR. J. D. DONALD, Hattiesburg: I have given quinin by mouth in all its forms. Hypodermically, 20 grains to-day will stave off a chill to-morrow, and another 20 grains will stave off the chill the next day; and then when I have given 40 grains, if I leave off the quinin for a few days, the chill returns, and will return every day until I give quinin hypodermically.

DR. WILLIAM KRAUS, Memphis, Tenn.: If the asexual form remains in the blood without the sexual form, a mosquito can bite that patient indefinitely without reproducing that disease in other persons. The idea obtains of screening patients suffering from fever—such a patient is infinitely less dangerous than the patients who are apparently well, and going about but still carrying the germs in their systems.

Whole-Time County Health Officer

DR. W. S. LEATHERS, University: The purpose of boards of health is to reduce sickness and to protect life. The keeping of vital statistics is the only satisfactory index of the efficiency of this work. The recent law passed through the efforts of this association will yield important results. Our present State Board of Health is accomplishing much through the new state laboratory, the inspector of municipal sanitation, the several field workers in the hookworm campaign and numerous bulletins and public addresses. The weakest spot in the battle-line is the county health officer—underpaid, untrained and hampered by the necessity of making his living by private practice. The popular fad to-day is conservation. Moreover, we know how to prevent most of the diseases that ravage the country. Yet the average annual sick-rate in Mississippi from seven common diseases (typhoid, tuberculosis, scarlet fever, diphtheria, malaria, uncinariasis and diarrhea) is about 460,000, with a death-list of over 8,000. The cost from sickness is over $16,000,000 a year—more than twice the total state revenue—while the economic loss from death (based on insurance estimates of life values) is over $12,000,000 in addition. A small part of this sum properly expended would eliminate a large percentage of the illness and death. The greatest need of to-day is the whole-time county health officer. His duties are as important and as onerous as those of the circuit judge and many other officials who are paid to give their whole time to the public service. At present in most counties his salary is merely nominal and his performance correspondingly small. His duties are many—school inspection, control of water-supplies and of food depots (hotels, groceries, slaughter-houses, etc.), administration of pure food laws, management of epidemics, and education of the public by addresses, bulletins, newspaper articles, etc. The entire time of a trained man is needed. Other states are beginning to move along this line. Mississippi can and should move with them. This reform will be accomplished when the people realize that "sick people are an expense to the state whether the burden be borne by the state or by the individual, for the wealth of the state is but the aggregate wealth of the people, and any state that will not assume the duty of caring for the public health will fail in its competition with other states."

LOUISIANA STATE MEDICAL SOCIETY

Thirty-Fourth Annual Meeting Held at Baton Rouge, April 22-24, 1913

The President, Dr. B. A. LEDBETTER, New Orleans, in the Chair

Officers Elected

The following officers were elected for the ensuing year: president, Dr. Fred J. Mayer, Opelousas; vice-presidents, Drs. A. J. Perkins, Lake Charles; A. J. Gladden, Monroe; W. S. Rutledge, Ruston; secretary, Dr. L. R. DeBuys, New Orleans; treasurer, Dr. E. W. Mahler, New Orleans.

New Orleans was selected as the place for holding the next annual meeting.

What the General Practitioner Should Know about Gonorrheal Iritis

DR. R. F. HARRELL, Alexandria: In a certain percentage of cases of gonorrhea which begin as a local, specific urethritis, there occurs the absorption of bacteria or toxins from the urethra which invade the entire system and have a selective affinity for the serous fluids and surfaces of the body. Most of these cases manifest themselves at first in the form of a gonorrheal arthritis of one or more joints, but we may have pericarditis, endocarditis, peritonitis or meningitis. Gonorrheal iritis generally, but not always, accompanies or follows an attack of gonorrheal arthritis. When the system is once invaded by gonorrheal toxins, the patient is not entirely free from the liability to attacks of iritis for

a period of ten years. In the local treatment of these cases we use atropin, colyria and heat compresses. Dionin (10 per cent.) instilled two or three times daily, is one of the best remedies as its first effect is to bring about a great increase in the blood-supply to the eye, followed by a recession that opens up the lymph spaces and relieves the eye of a certain amount of disease process and also assists in the control of pain. The constitutional treatment consists in the use of antigonococcic serum and vaccines.

DISCUSSION

DR. GEORGE S. BEL, New Orleans: A patient of mine had gonorrhea, and six weeks following it he had an acute general septicemia, with acute endocarditis and pericarditis. The gonococcus was isolated from the endocardium and pericardium, showing conclusively that the germs invade other parts of the system than the urethra. The organisms were found in the tissues of the heart. This patient had a small aneurysm of the ventricle which perforated into the auricle and caused sudden death.

Acute and Subacute Pharyngeal Tonsillitis

DR. HOMER DUPUY, New Orleans: If one recognizes infectious adenoids as they recur, and treats them properly, he may prevent (1) chronic hypertrophy, or adenoids; (2) infections of the middle ear and (3) extension into the lymphatics of the neck. As to treatment, sprays and douches should be condemned. To reach the postnasal space, argyrol, 20 to 30 per cent., and epinephrin solution, 2:3,000 or 2:4,000, in each nostril is both antiseptic and astringent and reduces the hyperemia and removes one of the features in the acute infection.

DISCUSSION

DR. LEON J. MENVILLE, Houma: A child, aged 6, had enlargement of the lymph-nodes of the neck. The case was diagnosed by a reputable physician as tuberculous adenitis, and later diagnosis was made of sarcoma. It was found that the enlargement of the lymph-nodes was due to adenoids and subsided on removal of the adenoids.

DR. J. A. CARUTHERS, Baton Rouge: From 40 to 50 per cent. of the children in our public schools to-day are affected with adenoids, and fully 50 per cent. of the old chronic catarrhal conditions in the middle ear in after life are due to adenoids. If these things can be relieved or stopped in early infancy, it is of infinite importance to do so, because later those chronic inflammations in the middle ear will suppurate, adhesions will form, and then it is absolutely impossible to give relief. I examined fifty children in the public schools and thirty-eight had enlarged pharyngeal tonsils.

DR. L. J. GENELLA, New Orleans: One hundred per cent. of children in the ninth year of age have postcervical adenoids. Between the ninth and eleventh year the percentage is less, and between 11 and 14 we find very few of them. In making a diagnosis of postcervical adenoids, one should be slow in attributing it to a pathologic condition in children 7 and 9 years of age.

DR. R. C. LYNCH, New Orleans: We are all accustomed to associate the presence of hypertrophy or disease of the pharyngeal tonsil with the infant or young child. I believe in New Orleans recently we have been in the midst of a mild epidemic of acute infections of the pharyngeal tonsil in adults giving rise to severe symptoms of toxemia. They were of a severe character, giving rise to myalgia, cervical pain, enlargement of the cervical lymph-nodes, and the presence of streptococci in abundance throughout the pharyngeal tonsil.

DR. G. C. CHANDLER, Shreveport: I do not think much of the medical treatment of adenoids. Operation for their removal is so simple and so quickly done, that I advise their removal at once.

DR. H. E. DUPUY: When the symptoms indicate chronic hypertrophy, nasal obstruction and enlargement of the lymph-nodes with respiratory symptoms, we should resort to radical treatment. We must be impressed with the fact that they have such a thing as adenoiditis in early life which is often so obscure in its general features that it escapes the observer.

Ehrmann's Palmin Test

DR. J. A. STORCK, New Orleans: Of eight instances in which I applied this test, six proved positive, and in each the patient showed no evidence of any pancreatic disturbance. In the two instances in which no reaction occurred, there were evidences of pancreatic disease, fat droplets, ingested meat fibers, meat nuclei in the feces and sugar in the urine. Recently I have been using palm oil free of fatty acids for testing the function of the pancreas and can report it to give satisfaction.

State and Local Legislation and What It May Accomplish for Sanitation

DR. S. D. PORTER, Baton Rouge: Suggestions for state and local legislation which may accomplish much for sanitation are: 1. More liberal appropriations for public health work. 2. The establishment of laboratories for the study of the causes of transmission of diseases. 3. A law similar to our medical practice and parish superintendence of education laws prescribing the qualifications of health officers. 4. A law establishing medical inspection of schoolchildren, with more definite instructions to the schoolchildren in personal hygiene and general sanitation. 5. A law establishing a chair of hygiene and sanitation in our colleges and universities, and more systematic teaching of it in all our institutions of learning.

Eclampsia

DR. CHARLES MCVEA, Baton Rouge: I have made it a rule to examine the urine of every pregnant woman every Wednesday morning. Of seventeen patients whom I have had, thirteen were primiparae; one was pregnant for the second time, two were pregnant for a third time, and one was pregnant for the seventh time. Eight had their convulsions at night. Four thought their convulsions were brought on by an approaching storm. Ten of these I saw for the first time in the convulsions. Ten had convulsions before delivery, two during labor and five after delivery—one six hours after delivery. Seven had their seizures or convulsions at or near the eighth month. Four were 16 years of age, two 17, nine were less than 25 and two were over 35.

When we do not have time to give calomel, an ounce of magnesium sulphate should be given. If the pulse is rapid, I use veratrum in doses of from 15 to 20 drops, hypodermically by preference. I do not believe in giving morphin because it interferes with the action of the skin, liver and kidneys. I do not believe in chloroform or ether, except as an expedient during delivery.

DISCUSSION

DR. J. C. WILLIS, Shreveport: Dr. McVea's excellent record is due largely to the fact that he has kept in close touch with his patients. Had he allowed many of them to go along without examining their urine, and had a large amount of poisonous material in the body, overlooked between analyses, accumulated, he would not have had such a splendid record. I have had better success since I have adopted a plan similar to the one Dr. McVea has outlined.

DR. ROBERT C. KEMP, Baton Rouge: The use of the sphygmomanometer in observing blood-pressure in these puerperal women is a valuable aid. It is rare that a woman will develop a convulsion if she has had a normal blood-pressure; but in the presence of albumin, with a high blood-pressure, the convulsive seizures become threatening to the lives of these patients.

DR. E. L. SANDERSON, Shreveport: I have had only two cases of puerperal eclampsia in five years of practice. I have examined the urine of these women every month for the first two or three months of pregnancy and later on every week or ten days. I believe intestinal intoxication is at the bottom of many cases of puerperal eclampsia, and at the time convulsions take place we may have an acute nephritis setting in.

Emergency Surgery of the Skull

DR. ROBERT C. KEMP, Baton Rouge: Operation should be done in all cases of traumatic cerebral hemorrhage, not only to save the life of the patient immediately, but to prevent posttraumatic epilepsy. The success of surgery of the skull

depends entirely on a rigidly aseptic technic, for if sepsis enters the field, gloom will usually crown the result. The skull should be entered if possible at the site of the extravasation. I would advocate that every medical man be prepared to handle surgically every case of skull trauma in which hemorrhage exists. Success depends on careful aseptic technic and prompt action. In every case of unusual and alarming symptoms in the new-born, subdural hemorrhage should be considered.

DISCUSSION

DR. F. W. PARHAM, New Orleans: Many times we may have a serious injury from compression or actual injury of the brain from depressed bone without any evidence of it in the skin, except extravasation; and in these cases it would be well to make an incision in the skin and find out positively whether or not there is depression of the skull rather than let the cases go until symptoms are manifested.

Petrolatum as a Substitute for Beck's Paste

DR. PETER S. SALATICH, New Orleans: Yellow petrolatum is easier to handle than Beck's paste and more readily obtained. Beck's paste requires a special syringe and some trouble to use. The method I use to prepare it for injection is simple. Petrolatum can be purchased in flexible tubes, already sterilized. Sterilize the amount necessary in an open vessel, set in the sterilizer or water bath, then draw it into one or more ordinary glass syringes and use partly warm or cool, as is done with Beck's paste. In the most foul and freely suppurating cavities, after one injection and without any other treatment, all odor and suppuration diminish. After an incision has been made (only a small one is necessary when petrolatum is used), all the pus is pressed out; the cavity is then filled with petrolatum and the wound needs no dressing for two or three days, at the end of which time very little odor and pus remain. The procedure is then repeated, and the dressings can remain for a longer period, only wiping of the abdomen with alcohol being necessary. It is marvelous how rapidly healing takes place in cases in which the entire wound above the fascial layers suppurates, and with less danger of hernia resulting. In all acute and subacute sinuses it is best to wait until a little serum or seropus exudes before injecting the petrolatum, especially if there is any fear of dead bone being at the bottom, which must be removed or the patient is made worse; for the petrolatum stops drainage and the pus must find some other means of exit.

Prostatectomy Under Local Anesthesia

DR. CARROLL W. ALLEN, New Orleans: In cases in which I have applied the principle of anoci-association of Crile by resorting to a preliminary injection of the prostate with anesthetic solutions, there has been an improvement in the results, as these patients show practically no change in their physical condition after operation. The control of hemorrhage is accomplished by the logical addition of epinephrin to the injected solution; the absence of all bleeding in patients so treated is most striking, practically no blood being lost at all, just enough to moisten a few sponges; thus there is a decided gain for the patient, the two-shock-producing factors being eliminated. The results of this technic have been borne out by a more rapid convalescence of patients, and this method combined with a two-stage operation, opening the bladder a few days before under local anesthesia, has enabled me to carry to a successful termination cases of badly infected bladders in fever patients, on whom I would have hesitated to operate by any other method. I would urge that even under general anesthesia the surgeon resort to the preliminary injection of a local anesthetic combined with epinephrin.

DISCUSSION

DR. E. L. SANDERSON, Shreveport: In drainage of the bladder after prostatectomy one should be careful not to have the tube press on the posterior wall of the bladder as it will cause trouble. At necropsy I have seen two or three cases in which the weight of the retention catheter had perforated the posterior wall of the bladder.

DR. E. M. ELLIS, Crowley: I believe that the combined method of operating on these patients, especially those with a highly infected bladder, namely, opening the bladder a week before the final operation, draining it through the suprapubic route and irrigating it if necessary with antiseptic solutions, will relieve the kidneys of all previous pressure and put the patient in a much better condition for the final operation.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, May 13-14. Sec., Dr. F. T. Murphy, Brinkley; Eclectic, Little Rock, May 13. Sec., Dr. C. E. Laws, Fort Smith.

FLORIDA: Jacksonville, May 12-13. Sec., Dr. J. D. Fernandez.

MASSACHUSETTS: State House, Boston, May 13-15. Sec., Dr. Walter P. Bowers, Room 159, State House.

MICHIGAN: Y. M. C. A. Bldg., Detroit, May 22-24. Sec., Dr. B. D. Harison, 504 Washington Arcade.

NEBRASKA: Lincoln, May 28-29. Sec., Dr. C. P. Fall, Beatrice.

Nebraska February and March Report

Dr. C. P. Fall, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Feb. 12-13, 1913. The number of subjects examined in was 14; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 4, all of whom passed. Five candidates have been granted licenses through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Alabama	(1912)	81.5
Northwestern University Medical School	(1909)	79.5
Creighton Medical College	(1911) 77.5; (1912)	82.4

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Keokuk	(1878)	Iowa
Drake University	(1903)	Iowa
University of Minnesota, Dept. of Med. and Surg.	(1890)	Minnesota
Jefferson Medical College	(1906)	S. Dakota
University of Tennessee	(1912)	Tennessee

The March 12 examination consisted merely of the oral examination of one candidate, a graduate of Baltimore University, 1896, who passed with a grade of 80.4.

Maine March Report

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the written examination held at Portland, March 11-12, 1913. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 13, of whom 10 passed and 3 failed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Cooper Medical College	(1895) 86; (1898)	82
Hahnemann Medical College of Chicago	(1912)	85
Medical School of Maine	(1912)	80
Maryland Medical College	(1912)	80
Boston University	(1912)	85
College of Physicians and Surgeons, Boston	(1912)	76
Tufts College Medical School	(1908)	85
Harvard Medical School	(1912)	84
Jefferson Medical College	(1905)	92

FAILED

Medical School of Maine	(1912)*	
Maryland Medical College	(1912)	70
College of Physicians and Surgeons, Boston	(1909)	74

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Vermont	(1911)	Vermont

*No grade given.

V. 60 1913

Book Notices

FATIGUE AND EFFICIENCY. A Study in Industry. By Josephine Goldmark, Publication Secretary National Consumers' League. Introduction by Frederic S. Lee, Ph.D. Containing also the Substance of Four Briefs in Defense of Women's Labor Laws by Louis D. Brandeis and Josephine Goldmark. Cloth. Price, $3.50. Pp. 890. Russell Sage Foundation. New York: Charities Publication Committee, 1912.

In 1892 John Lubbock introduced an early closing bill in Parliament, and defended it with a memorial on the injuries resulting from overlong hours in shops. In America Louis Brandeis suggested that a similar plea might be made in support of a law limiting the hours of women's work. When the Oregon law fixing a ten-hour day for women in industry was carried to the United States Supreme Court, the case was entrusted to Mr. Brandeis, and the brief he presented marked a radical departure in the defense of labor laws, for he based his plea on the physiologic limitations of woman's strength and on the harmful effects on the present generation and on the race resulting from the overwork of women. The Supreme Court decided in favor of the Oregon law, declaring that woman's "physical nature and the evil effects of overwork on her and her future children justified legislation to protect her."

Mr. Brandeis' briefs were prepared chiefly by Josephine Goldmark of the National Consumers' League, and consisted of citations from the works of physiologists and clinicians, the reports of factory inspectors and sanitarians, on the nature of fatigue, the manifestations of fatigue, the fatigue-producing elements in modern industry, and the pathologic effects of fatigue especially on the female organism and through her on the following generation. The present book contains these briefs as an appendix.

The book proper is a treatise on fatigue in all its aspects. The preface is written by F. S. Lee, who speaks of the quickness with which industrialism has accepted the achievements of science in inanimate things, and the slowness which it has shown in recognizing the teachings of physiology with regard to the workman himself. "Methods and machines have been revolutionized, but the human element has not yet been eliminated. The man, woman or child is still essential to the machine, and while the inanimate agent demands more and more of him, his fundamental physiologic powers are probably not so very different from what they were when he built the pyramids and made papyrus."

The fatigue-producing elements in modern industry are illustrated by Miss Goldmark through certain industries, the descriptions of which make it evident that the increase of nervous disease among working people at present is largely caused by the excessive speed and excessive strain on attention which modern machinery entails. One chapter deals with the increase of efficiency under the eight-hour day as illustrated by the piece-workers at the Zeiss Optical Works in Jena. Ernst Abbe, the inventor of the condenser which bears his name, appears here as the first exponent of scientific efficiency, at once a physiologist, a humanitarian and a captain of industry.

The book will serve as an admirable reference authority to all who are interested in industrial hygiene.

MALARIA—CAUSE AND CONTROL. By William B. Herms, M.A., Assistant Professor of Applied Parasitology, University of California. Cloth. Price, $1.50 net. Pp. 165, with 39 illustrations. New York: The Macmillan Company, 1913.

It may be a matter of some surprise to many to know that California, in certain sections, has considerable malaria. It is asserted that it, like hookworm, has been imported into the state—probably by settlers from the malarious districts of other Southern states. This book gives a history of the systematic efforts to eradicate the malarial mosquito by the health authorities in the state and the different communities in which malaria exists. Most of this work has been done under the supervision of the author of the book.

The campaign in any community always included a mosquito survey, the enlistment of the support of the local health authorities, the proprietors of land projects, the education of the people, including the children in the schools, and such permanent measures as drainage and filling, and temporary measures such as the oiling of ponds and all pools of stagnant water. Legal measures authorizing counties or communities to conduct antimalarial campaigns, with the assessment of the expenses, have not been entirely successful. The governor of the state, a few years ago, vetoed a bill passed by the legislature. One county, however, has passed an ordinance providing for antimalarial campaigns in any community on the initiation of ten or more residents, with power to levy assessments to pay the expenses. The State Board of Health and the department of entomology of the state university, of which the author of this book is the head, have taken great interest in the antimalarial compaigns throughout the state and have afforded assistance to all communities desiring to conduct such campaigns. In view of the extensive campaigns against malaria in the South, to be conducted by the recently appointed Malaria Commission, the experience of California during the past few years should be of considerable interest, as most excellent results have been attained in all instances in which efforts have been made to eradicate the malarial mosquito. The economic features of the problem are graphically and interestingly described in this book.

TUBERCULIN IN DIAGNOSIS AND TREATMENT. By Louis Hamman, Associate in Medicine in the Johns Hopkins University, and Samuel Wolman, Instructor in Medicine in the Johns Hopkins University. Cloth. Price, $3 net. Pp. 381. New York: D. Appleton & Co., 1912.

After more than twenty years of experimentation and clinical experience, the time has arrived, when a sufficient amount of truth regarding the tuberculin reaction as a diagnostic and curative agent has crystallized to make it worth while in the opinion of the authors of this work to put it into systematic and permanent form. The work is the result of a large personal experience, which permits the production of a book of special practical value. Since correct views regarding the important clinical phenomena involved in the use of tuberculin can only be based on a clear understanding of the nature of tuberculin and the limitations of its activity, a considerable amount of theoretical matter has necessarily been introduced. The limitations of tuberculin as a diagnostic agent are clearly stated, and its use only as a subsidiary method is strongly urged. The impossibility of distinguishing by its means in ordinary cases between tuberculous infection and tuberculous disease or between active and latent tuberculosis is well brought out. The authors are advocates of tuberculin treatment as a means of treatment to be used along with other measures, a method of treatment which the clinician dare not neglect, but which he cannot rely on to the exclusion of other useful methods. The book should form a useful guide to those who wish to use intelligently and safely this valuable method of treatment, about which there has been much uncertainty in the past.

MANUAL OF BACTERIOLOGY AND PATHOLOGY FOR NURSES. By Jay G. Roberts, Ph.G., M.D. Cloth. Price, $1.25 net. Pp. 206, with illustrations. Philadelphia: W. B. Saunders, 1912.

This book seems to be admirably adapted for the use of nurses. The author evidently believes that the trained nurse is destined to become the teacher of the masses along the lines of preventive medicine and sanitation; therefore he has devoted considerable space to the subjects of infection, immunity and bacterial and serum therapy. The technical details of laboratory work and microscopic diagnosis are given little space, as the nurse is not concerned in these branches.

ESSAYS ON GENITO-URINARY SUBJECTS. By J. Bayard Clark, M.D., Assistant Genito-Urinary Surgeon to Bellevue Hospital. Cloth. Price, $1.25 net. Pp. 174. New York: William Wood & Co., 1912.

This is a collection of clinical lectures delivered by the author before his classes. There is no attempt at comprehensive treatment of any of the subjects, each being considered from the author's own point of view. The book contains much matter valuable to one interested in genito-urinary subjects.

Medicolegal

Validity of Statute and Board of Health Rule as to Wrapping of Bread

(State vs. Normand et al. (N. H.), 85 Atl. R. 899)

The Supreme Court of New Hampshire overrules exceptions to a conviction of the defendants of a statutory offense in not wrapping in paper, as required by a rule of the State Board of Health, bread exposed for sale. The court says that the 1911 statute involved in the case declares that the existence or maintenance of any unclean, unhealthful or insanitary condition or practice in any establishment or place where food is produced, manufactured, stored or sold, or of any car or vehicle used for the transportation or distribution thereof, is forbidden, and provides that "unclean, unhealthful or unsanitary conditions or practices shall be deemed to exist . . . if food in the process of production, storage, sale or distribution is unnecessarily exposed to flies, dust or dirt, or to the products of decomposition or fermentation incident to such production, storage, sale or distribution . . . or if there is any other condition or practice which shall be deemed as endangering the wholesomeness of food." It furthermore empowers the State Board of Health "to make all necessary rules and regulations for the enforcement of this act." Under this statute, the State Board of Health adopted the following: "Whereas, bread is an article eaten without being subjected to any preparation, and commonly undergoes frequent and objectionable handling and exposure in connection with its distribution, sale and delivery from bakeries, stores and wagons, it is ordered that all bread loaves, before removal from the baking room, shall be wrapped in clean, unused paper, unprinted or printed on one side only. The use of newspapers or of any unclean paper for the wrapping of any articles of food is prohibited."

In view of the well-recognized medical facts that the germs of disease are distributed by flies when they come in contact with food designed for human consumption, like loaves of bread, and that typhoid fevers are often traced to that cause, it is clear that the statute has direct reference to the public health. Such a condition or practice is a constant danger to the health of the community; and the statute was enacted to protect the people from that danger, and if enforced it would manifestly have that effect. Hence it is within the police power of the legislature and is a constitutional enactment, so far as its purpose is concerned.

The wrapping of bread in paper when exposed for sale would seem to be the most feasible way of protecting it from the contamination caused by handling and by the presence of dust and flies and perhaps other noxious insects, and it is clear that if the statute had contained the rule in question it would have been a valid provision. Nor does the fact that it was made by the board of health under a delegated power from the legislature render it invalid as a rule. The statute is complete in itself. It in effect declares that bread unnecessarily exposed to flies and dirt is a public menace and provides a penalty for the infringement of any of the provisions of the act. But to secure an efficient enforcement of the act, and to accomplish the legislative purpose, the State Board of Health is charged with the enforcement of the law, and for that purpose it is authorized "to make all necessary rules and regulations." This provision was not intended to authorize the board to legislate, or to add to, change, or modify the statute. It was not intended as a delegation of legislative power. The "rules and regulations" were to be such as might be deemed necessary "for the enforcement of this act." In order to prevent flies from congregating on the loaves of bread in bakers' shops and in their carts, one of the objects the legislature had in mind, some general rule, if a feasible one could be devised, was necessary for the practical enforcement of the act; and when the board of health made the rule requiring loaves of bread to be wrapped in paper it was not legislating, but merely exercising a power conferred on them by the state as administrative officers. It was its duty to enforce the law, and the rule it promulgated in the exercise of that power was a means it adopted for the accomplishment of that purpose. The delegation of such power is not unusual. No discretion is vested in the board to determine whether such exposure of bread is or is not a nuisance, or what the penalty shall be for such exposure. The board is merely authorized to abate the nuisance declared to exist by the law-making power, and for this purpose—that is, the enforcement of the law—to make reasonable rules and regulations, for the violation of which, resulting in the continuance of the nuisance, a penalty is imposed.

Sufficient Allegations to Show Liability for Malpractice

(Williams vs. Union Pacific Railroad Co. (Wyo.), 124 Pac. R. 505)

The Supreme Court of Wyoming reverses a judgment rendered for the defendant on a demurrer to the plaintiff's petition on the ground that it failed to state facts sufficient to constitute a cause of action. The court says that it was to be observed that the plaintiff alleged in the petition, among other things, that the defendant did not furnish him with proper hospital accommodations in the hospital provided for injured employees, and did not treat him properly therein, and did not furnish him the services of skillful or competent physicians or trained or capable nurses, and did not use or exercise due or reasonable care in the selection of such nurses and physicians and surgeons as were furnished to the plaintiff. With reference to cases of this character, it may be said that in general it has been held that a railroad company is not liable for the negligence of its surgeons if it has used reasonable care in their selection. The court thinks that is the correct rule. It is also held that the duty of a charity hospital ends with the selection of capable surgeons and nurses. And on demurrer everything alleged in the petition must be taken as true.

It was alleged in this case that the physician furnished did, in the performance of the operation, "carelessly and negligently, and unnecessarily cut a large hole in the neck of the plaintiff's bladder." The words "carelessly" and "negligently," as thus used, were not synonomous with the word "unnecessarily." The latter negatived the necessity of cutting the bladder in the performance of the operation while the former referred to the manner of doing and not to the necessity of doing. The necessity of cutting the bladder in the performance of the operation rested in the judgment of the surgeon, and called into activity his power to perceive and perform, which was the measure of his skill. If, therefore, he performed an act unnecessary to the operation with or without negligence, such act would be attributable to errors of judgment or want of skill.

Summary Annulment of Revocation Certificate Reversed

(In re Conrad (N. Y.), 140 N. Y. Supp. 630)

The First Appellate Division of the Supreme Court of New York reverses an order of a special term of the Supreme Court setting aside and annulling a certificate of the Board of Regents of the University of the State of New York and the revocation of a physician's license. The court says it appeared that the petitioner, who was duly licensed to practice medicine in the county of New York, was, on the eighth day of April, 1904, convicted of the crime of attempted abortion, which is a felony, and sentenced to not less than one year and not more than two years in the state prison. The record of conviction showed that he had been theretofore convicted of "keeping lying-in hospital without a license." After serving sixteen and a half months at Sing Sing, he was paroled, and on July 5, 1906, finally discharged. Prior to Dec. 3, 1908, the Medical Society of the County of New York, a domestic membership corporation, applied to the Board of Regents of the University of the State of New York for the revocation of the license of the petitioner to practice medicine, and for the annulment of the registration of his license, on a petition duly verified based on the indictment, conviction and sentence of the petitioner for the crime of an attempt to commit an abortion, and on the first day of April thereafter the Board of Regents revoked the license and registration, and caused

the fact to be certified to the clerk of the county of New York by the first assistant commissioner of education of the department of education of the state of New York, and it was received and filed by the county clerk, who, acting pursuant to the provisions of the statute, thereupon marked the registration of the petitioner's license to practice medicine "Annulled." On the thirty-first ray of March, 1911, the governor duly issued a pardon to the petitioner. Without expressing any opinion with respect to the regularity or validity of the action taken under the statute with a view to annulling the license of the petitioner to practice medicine and the registration thereof, or as to whether he had, or has, any remedy by which his right to practice medicine may be authoritatively determined before he attempts to practice and thus subject himself to prosecution, the court is of the opinion that the court was without jurisdiction, on mere petition or motion, to grant the relief for which the application was made. The Supreme Court has no authority on a summary application over the county clerk, excepting in so far as he acts under the constitution and law as clerk of the court; and manifestly in filing the certificate of annulment and marking the registration of the license as required by the statute he was not acting as clerk of the court.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Orthopedic Surgery, Philadelphia

May, X, No. 1, pp. 109-123

1 *Use of Intra-Articular Silk Ligaments in Paralytic Joints of Poliomyelitis Anterior. E. Bartow and W. W. Plummer, Buffalo.
2 Results Obtained by Implantation of Silk Tendons in Residual Paralysis of Poliomyelitis. N. Allison, St. Louis.
3 *Study of Condition Frequently Called "Sciatic Scoliosis." C. H. Bucholz, Boston.
4 *Seashore Treatment of Osteomyelitis. R. Hammond, Providence, R. I.
5 *Treatment of Congenital Flat-Foot by Tendon Transplantation. A. T. Legg, Boston.
6 Subluxation of Lumbosacral Joint as Cause of Paraplegia. Report of Case; Recovery after Manipulation. R. R. Fitch, Rochester, N. Y.
7 Tuberculosis (Primary?) of Supraspinatus Muscle. J. T. Rugh, Philadelphia.
8 Elephantiasis Neurofibromatosis of Foot with General Neurofibromatosis. J. T. Rugh, Philadelphia.
9 Treatment of Spastic Contractures by Neuroplasty. A. Stoffel.

1. Abstracted in THE JOURNAL, Aug. 3, 1912, p. 393.

3. **Condition Frequently Called "Sciatic Scoliosis."**—Sciatic scoliosis has been found a rather frequent affection by Bucholz. It is most frequent in the age between 30 and 40 years. It has never been observed in the age below puberty and is very rare in the age over 60. There seems no prevalence as to the side of the affection. Homologous cases are much less frequent than heterologous cases. Men are much more frequently affected than women; especially the extreme type is very rare in women. Traumatism plays an important, perhaps the main, rôle in the etiology. A marked lateral deviation is usually connected with a marked flattening or reversing of the lumbar lordosis. The prognosis is much better in cases with a definite traumatic cause than in those with an indefinite slow onset.

Among forty patients seen by Bucholz there are only nine women and only one of them presents a marked lateral deviation. Among the thirty-one male patients the cause has been a single trauma in twelve cases: Heavy lifting in six cases, a certain catch in chopping wood or shoveling coal in two cases, falling on the hip or on the buttocks in three cases, a sudden catch after a heavy day's work in one case. In the remaining nineteen cases the onset has been gradual and the cause was probably a frequent occupational strain of the sacroiliac or lower lumbar region. Frequent heavy lifting, heavy carrying (peddler), working on a sewing machine (tailor), occupation as motorman or conductor on a street car (three cases), frequent bending forward (shoe-cleaner), frequent athletic strain in rowing, etc. In a few cases exposure to frequent change in extreme temperature was mentioned as a further cause.

Among the nine female patients one reported a certain sudden wrenching of the back, one a single and one a repeated fall on the hip. In two cases the affection was due to childbirth, and in four cases with a slow onset the cause was unknown. The deviation of the back was marked or extreme in twenty male patients; in nine of those with a definite traumatic cause and in eleven of those with a frequent occupational strain. Three of the female patients showed a marked, none an extreme deviation of the back. Of those three, one reported a fall on her hip and one childbirth as cause, while in one case the cause was unknown. Among the male patients the general health and appearance was good in sixteen cases, fair in ten cases and poor in five cases. Two patients were fat men with a marked protuberance of the abdomen. Among the female patients six presented a poor and three a fair general health and appearance, one patient was a stout woman. The direction of the deviation was toward the affected side in only four cases, all being men. Two had reported a definite and two an indefinite traumatic cause.

Among the male patients seventeen presented a very flat or obliterated lumbar lordosis and in five cases the lordosis was even reversed. Only three patients showed an increase of the lumbar lordosis, while in six cases no note has been made. Among the female patients two presented a diminished, two a reversed and three an increased lordosis; in two cases no note has been made. Among the male patients with a definite traumatic cause the result of the treatment was satisfactory or good in six cases and not satisfactory in four cases. In two cases a distinct relief was noticed, but was not constant. Among the male patients with an indefinite cause the result of the treatment was very satisfactory in three cases only, a certain improvement was reported in four cases, inconstant improvement in one case. In eight cases the result was unsatisfactory; in six of them the time of treatment has been several months up to one and one-half years. In four cases no notes have been made as to the result, two of them being under observation only one or a few days. Among the female patients four showed a satisfactory result, three some improvement and two, both with a slow onset, no improvement. With a few exceptions it is noticed that the time between the onset of the disease and the treatment at the hospital has been much shorter in those cases which showed a satisfactory result than in the others.

4. **Seashore Treatment of Osteomyelitis.**—Hammond does not advocate non-surgical treatment because he says practically every case needs surgical interference, and should be treated according to its needs, whether it be the simple curetting of a sinus or the removal of the entire sequestrum, performed at the proper time as indicated by the studies of Nichols. After the surgical operation has been performed, however, there is nothing, in Hammond's opinion, which contributes so much to the upbuilding of the patient's general health and firm closure of the sinuses as a prolonged residence at the seashore with sea-bathing and exposure of the body to sunlight. He cites five cases.

5. **Treatment of Congenital Flat-Foot.**—Legg transplants the tendon of the tibialis anticus to the periosteum on the under surface of the scaphoid. With a dry dressing over the incision the foot is put up in plaster in a slightly overcorrected position from the toes to the knee. It is Legg's practice to keep the foot in plaster for nine to ten weeks and then allow walking, supporting the arch for about two months by a felt pad. Massage without manipulation and hot and cold showers are ordered as soon as the plaster is removed. It is most important that the operation should be done at about the fourth or fifth year to obtain the best results.

American Journal of Public Health, New York

April, III, No. 4, pp. 297-412

16 The Negro: His Relation to Public Health in South. C. E. Terry, Jacksonville, Fla.
17 Classification of Health-Board Expenditures. M. N. Baker, New York.
12 Collection and Disposal of City Waste and Public Health. P. M. Hall, Minneapolis.
13 Need for More General Cooperation between Health and Police Departments. S. M. Gunn, Boston.
14 Tuberculosis, a Public Health Problem. R. H. Bishop, Cleveland.
15 Public Dump and Public Health. C. E. Terry, Jacksonville, Fla.
16 Some Newer Problems and Newer Phases of Antituberculosis Warfare in United States. S. A. Knopf, New York.
17 Standard Methods for Bacteriologic Examination of Water. E. M. Chamot, Ithaca, N. Y.

Boston Medical and Surgical Journal

April 24, CLXVIII, No. 17. pp. 601-636

18 Trichinosis. T. F. Leen, Boston.
19 *Diagnostic Significance of Leukocyte Count in Osteomyelitis and Tuberculosis of Bones in Childhood. E. W. Fiske, Boston.
20 Aspects of Milk Supply: Some Features of Milk Situation. J. O. Jordan, Boston.
21 Idem: Production of Certified Milk. J. A. Foord, Amherst, Mass.
22 Idem: Medical Milk Commission of Boston. R. L. De Normandie, Boston.

19. **Leukocyte Count in Osteomyelitis and Tuberculosis of Bones.**—The routine examination by Fiske, of children with tuberculosis of the bones and osteomyelitis, two-thirds of the cases in both diseases being in an acute stage, showed an average white count of 11,600 for the former and 16,200 for the latter, a significant difference of about 5,000 leukocytes. That this difference is constant, and is a reliable factor in diagnosis, is shown by the fact that in osteomyelitis but 24 per cent. of the counts were below 12,000 as compared with 66 per cent. in tuberculosis, while 39 per cent. of the former were over 18,000 and but 13 per cent. of the latter over 15,000. This difference is still more emphasized in the acute cases, which make up the majority seen in hospital practice, the average for osteomyelitis being 22,200 and for tuberculosis 11,400, a difference of nearly 11,000.

The conclusion drawn by Fiske from this series is, therefore, largely a confirmation of the well-known theory that leukocytosis does not occur in bone infection by the tubercle bacillus, but only in the presence of a pyogenic organism. Cases which are clinically tuberculous, and have a high white count, must find their explanation in some other focus of infection, or in a mixed infection at the original site. The only cases offering difficulty in diagnosis from the white count alone are those cases of osteomyelitis with a normal count or very low leukocytosis, which are commoner than most text-books affirm. In these, the relation of the count to other symptoms, such as the fluctuation of the count with the temperature or with the general condition (a relation which does not exist in bone tuberculosis), the presence of a freely draining bone abscess, especially if the count is low following operation, or the existence of a long standing, low grade process in a case in which the count has been at one time high, should point to a diagnosis of osteomyelitis, to be readily confirmed by other diagnostic data.

Bulletin of American Academy of Medicine, Easton, Pa.

April, XIV, No. 2, pp. 113-184

23 Relation of Foreign Population to Mortality and Morbidity Rate of Philadelphia. L. J. Hammond and C. H. Gray, Philadelphia.
24 Teaching of Social Ethics and Its Relation to Conservation of Child. W. S. Hall, Chicago.
25 Relative Physical Advantages of School Lunches in Elementary and Secondary Schools. I. S. Wile, New York.
26 Course in Hygiene and Sanitation in School of Medicine of Syracuse University. J. L. Heffron, Syracuse, N. Y.

Canadian Medical Association Journal, Toronto

April, III, No. 4, pp. 261-351

27 Some Clinical Observations on Arteriosclerosis. J. Third, Kingston.
28 Three Cases of Acromegaly with One Autopsy. E. J. Mullally, Montreal.
29 Abdominal Injuries. A. MacKinnon, Guelph, Ont.

Georgia Medical Association Journal, Augusta

April, II, No. 12, pp. 379-408

30 Drainage Sequent to Certain Surgical Procedures. J. N. Ellis, Atlanta.
31 *Psychoses Accompanying Pellagra. E. M. Green, Milledgeville.
32 Case Histories in Neurology. L. M. Gaines, Atlanta.
33 *Parsimony in Nutrition. G. M. Niles, Atlanta.
34 Twin Pregnancy in Double Uterus. J. G. Earnest, Atlanta.
35 Cystoscopy as Aid in Surgical Diagnosis. W. S. Goldsmith, Atlanta.
36 Case of Splenomyelogenous Leukemia with Unusually High Leukocyte Count. W. H. Malone, Marietta.

31 and 33.—Abstracted in THE JOURNAL, June 8, pp. 1779 and 1782.

Indiana State Medical Association Journal, Fort Wayne

April, VI, No. 4, pp. 137-209

37 Making of a Specialist. J. F. Barnhill, Indianapolis.
38 Bronchoscopy and Esophagoscopy. A. E. Bulson, Fort Wayne.
39 *Phenolsulphonephthalein as Determinate of Kidney Function. H. K. Bonn, Indianapolis.
40 Treatment of Chancroids with Cocain. F. M. Freeman, Goshen.
41 Thyroidism and Clinical Significance of its Perversions. P. F. Martin, Indianapolis.
42 Anomalous Internal Carotid Artery. A. P. Roope, Columbus.

39. **Phenolsulphonephthalein.**—Bonn has made observations with this test on eight normal individuals, eight kidney cases and seven prostatic cases. He found that phenolsulphonephthalein appears in the urine of patients having apparently normal kidneys in from two and one-half to eleven minutes, when injected subcutaneously. In patients with renal lesions of varying severity, he found in two cases of marked kidney disturbance, the drug having been given intravenously, that the dye promptly appeared in two and one-half minutes. Again, in other cases having approximately the same condition of affairs present, the drug, given subcutaneously, did not appear for from fifteen to twenty minutes. Therefore, he does not consider the time of appearance of the dye to be of much value. It simply tells when one should begin the collection of urine for percentage estimation.

The dye was excreted at a fairly constant rate in normal individuals, the first hour averaging 39 per cent., and the second 17 per cent. The average excretion of the drug for two hours was 56 per cent. In cases of renal lesions, the output of the dye was considerably decreased except in one case, that of a renal sarcoma, in which the remaining kidney was evidently doing the work of both kidneys. These abnormal cases averaged 24 per cent. for the first hour of the test, and 10 per cent. for the second, the total output being 34 per cent. Therefore, Bonn believes that the phenolsulphonephthalein output is markedly decreased where there exist lesions of renal origin.

Since a large number of these cases presenting renal disturbance have been operated, following which marked improvement has taken place, Bonn does not think that a low percentage of elimination of this dye should absolutely forbid operation, or be an absolute deciding point as to operation. He believes that a good plan to follow is to order forced water and repeat the test within a week. If the percentage of elimination has remained about the same, the probability is that the kidney is working at its maximum and will, in all likelihood, withstand the anesthesia and operation satisfactorily. It is unnecessary to have the patient drink a quantity of water before the test is made, because if reflex anuria occurs, the inhibition will be bilateral and water may be given at any time. This fact may even help to accentuate the findings from a diseased kidney.

When ureters are catheterized, Bonn says, it is essential to use the flute-end catheters or Garceau's one-catheter cystoscope, else there will occur leakage around the catheters and so produce errors in the percentage of dye eliminated. It is preferable, with ureteral catheterization, to give the drug intravenously and to take the percentage of dye eliminated every fifteen minutes for forty-five minutes. It is obvious that in an intravenous injection part of the dye may either not be forced into the vein or may perhaps leak from it

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This fact should cause an early appearance time but a delayed excretion. This dye test seems to meet all of the conditions which Geraghty and Rowntree set up, although Bonn does not believe that a test of this sort will inform a surgeon whether a patient can be operated safely. The fact that the test is absolutely non-toxic and does not seem to burden the kidneys and can be almost entirely recovered from the urine is decidedly in its favor. However, he regards the phenolsulphonephthalein test as the most accurate one for the determination of renal function.

Iowa State Medical Society Journal, Clinton

April, II, No. 10, pp. 697-768

43 Bismuth Paste. J. C. Powers, Hampton.
44 Contusions of Eyeball. L. Weber, Davenport.
45 Value of Typhoid Vaccine in Prophylaxis and Treatment of Typhoid, and its Method of Administration. L. Reppert, Muscatine.
46 *Increased Diet in Typhoid; Arguments For and Against. M. J. Kenefick, Algona.
47 Surgical Complications and Sequelae of Typhoid. J. C. Rockafellow, Des Moines.
48 Perforative Lesions of Intestine; Problems of Their Early Diagnosis and Treatment. A. J. Burge, Iowa City.
49 Value and Efficiency of Tuberculin Tests. H. V. Scarborough, Oakdale.

46. Abstracted in THE JOURNAL, May 25, 1912, p. 1629.

Kentucky Medical Journal, Bowling Green

April 15, XI, No. 8, pp. 307-338

50 Tubal Pregnancy. S. T. Yeatts, Louisville.
51 Appendicitis; Report of Fatal Cases. E. S. Allen, Louisville.

Medical Record, New York

April 26, LXXXIII, No. 17, pp. 737-782

52 What is Psychanalysis? E. W. Scripture, New York.
53 Gastralgia Nervosa and its Differential Diagnosis. J. Gutman, Brooklyn.
54 *Albumin Analysis of Sputum. J. Ritter, Chicago.
55 Epilepsy. C. R. M'Kinnies, Norristown, Pa.
56 Management of Puerperium and its Minor Abnormalities. B. A. Fedde, Brooklyn.
57 Early Diagnosis of Tuberculosis and Internal Antisepsis. C. Am Ende, New York.

54. Albumin Analysis of Sputum.—Ritter advocates that the examination of the sputum should become a routine method in every suspected or positive tuberculous case. The test is made as follows: Put 5 c.c. of sputum into a glass cylinder of about 25 c.c. capacity (glass cylinder must be supplied with a well-fitting ground-glass stopper), add 5 c.c. of distilled water and about 10 drops to 1 c.c. of glacial acetic acid, replace the stopper, shake well, and set aside. Shake occasionally during the next twenty or thirty minutes, then proceed to filter. If the sputum is suitable for filtration it will have separated into three distinct layers reminding one very much of an expressed stomach content ready for testing. Should the middle or watery portion of the sputum solution be still a little opaque, showing the presence of some remaining unprecipitated mucin, add a few drops more of the glacial acetic acid, again shake well and set aside as before. The fluid portion now appearing clear, proceed to filter it through a plain wetted filter and test the clear filtrate for albumin in the usual way by either Heller's test or the heat test, both of which are very satisfactory.

Ritter has found the ferrocyanid test the most reliable and accurate. If to an albuminous solution of sputum in a test tube a drop of 10 per cent. ferrocyanid of potassium solution is added, an approximate idea of the amount of albumin can at once be gathered by observing the drop of ferrocyanid solution carrying down the precipitated albumin and one can also notice the difference between a massive albumin content and one in which only a small amount of albumin is present by the manner in which the precipitated albumin falls to the bottom. Ritter says that if the chemical examination of the sputum is albumin positive but tubercle bacilli negative with physical findings obscure and indistinct, the intradermal injection of tuberculin will often change both to positive. A positive albumin reaction and a positive tuberculin test are of far more importance diagnostically than the negative clinical examination, also the negative value of the albumin and the tuberculin tests are of far greater, of more positive value, than the negative clinical examination, because a negative clinical diagnosis may still be doubtful, may not be positively negative. A single positive sputum finding cannot be considered positively and diagnostically tuberculous but a single negative albumin reaction can assuredly be considered as non-tuberculous. A negative sputum for albumin is also microscopically negative for the tubercle bacilli; usually with the open or infectious cases both albumin and bacilli will be found in the sputum, while, in the closed or non-infectious cases albumin minus the bacilli will be present. The positive albumin reaction is a sure indication of an inflammatory invasion of the pulmonary parenchyma which may be tuberculous, pneumonic or congestive, and the reaction is always negative when the inflammatory process has not affected the substance of the lung as in acute and chronic bronchitis and asthma, hence the reaction is of most importance in those cases in which the pulmonary infection is not yet manifest and the differential diagnosis lies between tuberculosis and simple bronchial catarrh. Albumin in the sputum is often the forerunner of the tubercle bacillus and albumin may be found in the sputum many months before the bacilli make their presence known, hence a positive sputum content with but meager or very slight physical findings and negative bacilli favors a possible incipient or pre-incipient tuberculous diagnosis, and like all clinical signs it must be considered with all the other signs, including both subjective and objective, to arrive at positive conclusions.

Military Surgeon, Chicago

April, XXXII, No. 4, pp. 327-425

58 Some History of Annual Report of Surgeon General, with Extracts. A. G. Love, U. S. Army.
59 Proposed Method of Pitching and Striking a Field Hospital Rapidly. W. W. Reno, U. S. Army.
60 Indian Medical Service. H. W. Jones, U. S. Army.
61 Ill Effects of Smoke on Health and Comfort. J. B. Stoner, Washington, D. C.

New Jersey Medical Society Journal, Orange

April, IX, No. 11, pp. 545-598

62 Physician as Public Servant. G. K. Dickinson, Jersey City.
63 Gunshot Wounds of Abdomen in Civil Practice. F. R. Haussling, Newark.
64 Eugenics. W. P. Melcher, Mt. Holly.
65 Pulmonary Embolism. J. A. Maclay.
66 Abdominal Cesarean Section. E. A. Ill, Newark.

New York Medical Journal

April 26, XCVII, No. 17, pp. 853-906

67 Roentgen Rays in Inoperable Primary Carcinoma of Breast: Report of Twelve Cases. G. E. Pfahler, Philadelphia.
68 Intravesical Diagnosis and Treatment. L. Buerger, New York.
69 Operation, When Required, in All Common Rectal Diseases, without General Anesthesia or Pain. W. F. Burrows, New York.
70 Case of Vitiligo. N. T. Beers, New York.
71 Orbital Cellulitis. A. Wiener, New York.
72 Thyroid Medication in Children. M. B. Gordon, New York.
73 Newer Teachings of Diseases of Gastro-Intestinal Canal. M. I. Knapp, New York.
74 Electricity in Rectal Diseases. F. H. Williams, Boston.
75 *Treatment of Tuberculous Bone Abscesses and Sinuses with Tuberculin. W. S. Niblett, Baltimore.
76 Ointment in Granulating Wounds; Treatment. G. B. Massey, Philadelphia.
77 Syphilis. H. M. Greene, Portland, Ore.
78 Morphin in General Practice. C. J. Douglas, Boston.

75. Tuberculous Bone Abscesses.—In all his cases of this kind Niblett has been systematically using old tuberculin locally with good results since August, 1911. He says it is very stimulating to the sluggish granulations and converts the creamy pus into serosanguineous pus. After two or three injections the sinuses appear healthier and the discharge is markedly decreased.

The technic consists of the injection of about 120 minims of 1 to 500 old tuberculin solution into the depths of the sinus by means of a syringe or a small, soft rubber catheter, which is withdrawn as the injection is made, in the endeavor to bring the tuberculin into immediate contact

with the walls of the sinus. After three or four injections the strength of the tuberculin is increased from 1 to 500 to 1 to 250, or even 1 to 50. This is governed by the reaction, both local and systemic. The injections are given biweekly. There is some systemic as well as local reaction after the first injection. The patient's temperature may reach 101 or 101.5 F., with some lassitude, but this is less marked after the first two or three injections, and usually disappears entirely after subsequent treatments. Great care must be taken to use weak tuberculin solution, as it is desirable to avoid a rise of temperature.

New York State Journal of Medicine, New York

April, XIII, No. 4, pp. 177-232

79 Perforated Duodenal Ulcer. N. Jacobson, Syracuse.
80 Perforating Duodenal and Gastric Ulcers. G. D. Gregor, Watertown.
81 Cancer Problem. L. R. Colegrove, Elmira.
82 Early Diagnosis of Intestinal Cancer. F. H. Nichols, Jamestown.
83 Pulmonary Tuberculosis of Pregnant Woman. A. Jacobi, New York.
84 Operative Surgery of Goiter. J. P. Marsh, Troy.
85 Goiter from Surgical Standpoint. W. Lathrop, Hazelton, Pa.
86 Accidents of Hertzla Operation. D. R. Kathan, Schenectady.
87 Means and Methods of Reducing Death Rate from Surgical Operations. M. Clinton, Buffalo.
88 Uses of Plaster of Paris as Surgical Dressing. H. F. Gillette, Cuba.
89 Einhorn Bead Test for Estimation of Digestion. W. G. Morgan, Washington, D. C.
90 Diet in Acute Disease. W. S. Gleason, Newburgh.
91 Case of Gonorrheal Conjunctivitis Aborted by Two Per Cent. Solution of Nitrate of Silver. J. H. Claiborne, New York.
92 Immuno-Therapy in Ophthalmology and Oto-Laryngology. R. L. Crockett, Oneida.
93 Hypertrophy of Pharyngeal Lymphatic Ring as Causative Factor in Production of Epileptic Equivalents. W. S. Daly, Ogdensburg.
94 "Taking the Cure" in California. C. B. Slade, New York.

Vermont Medical Monthly, Burlington

April, XIX, No. 4, pp. 79-104

95 Constipation. E. B. Watson, Williamstown.
96 Some Common Results of High Percentage of Fat Used in Infant Feeding. C. K. Johnson, Burlington.
97 Cardiac Disease with Special Reference to Treatment. J. P. Gifford, Randolph.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

April 12, I, No. 2728, pp. 753-804

1 *Rheumatoid Arthritis. J. Barr.
2 Various Forms of Fibrositis and Their Treatment. A. P. Luff.
3 *Types of Organism in Series of Bone and Joint Tuberculosis of Children. J. Fraser.
4 Clinical Demonstration of Operation for Prolapsus Uteri Complicated by Hypertrophy of Cervix. W. E. Fothergill.
5 "Suppurating" Branchial Cyst. C. A. Robinson and G. W. Thomas.
6 Two Cases of Penetrating Wound of Heart Treated by Operation. E. De Verteuil.
7 Nascent Iodin Treatment of Lupus Nasi. P. W. Bedford.

1. **Rheumatoid Arthritis.**—The earlier the recognition of the disease, says Barr, the more successful the treatment. Attention should be first directed to the *prima via*, the teeth should receive scrupulous attention and all sepsis should be eradicated; the acid fermentation in the stomach should be eliminated, and this is most readily accomplished by cutting off all saccharin and farinaceous articles of diet, and placing the patient for a few days on an abundance of red meat with plenty of hot water. Red meat produces ammonia, which neutralizes the sarcolactic acid in the muscles; then milk to which some sodium bicarbonate and chalk or lime water have been added, junket and cream. Afterward green vegetables and farinaceous food, except oatmeal; a fair amount of fat should be given, especially olive oil or cod-liver oil; at least an ounce of one of these oils should be given every night at bedtime. Bacon gravy, fat bacon, cream, butter or margarine are valuable adjuncts, but beef and mutton fats had better be eschewed. The patient should take a liberal allowance of table salt with meals. All acids and acid fruits, rhubarb, tomatoes and asparagus should be avoided. When saccharoses are considered permissible, glucose and honey are better than cane sugar or jams, but perhaps a little marmalade may be allowed occasionally. When the patient is improving, grapes, bananas, nuts, stewed prunes and figs may be allowed; saccharin is better than sugar, more especially if the urine has become alkaline under treatment, and tends to deposit phosphates.

Regarding drink, there is nothing better than pure water, especially when hot, weak tea, milk and soda water (containing about 30 grains of sodium bicarbonate to the pint), plain barley water and raisin tea. Avoid all sweet and acid drinks, wine and malt liquors. Regarding alcohol, Barr thinks the patient is better without any, but if for any particular reason a little is ordered it should be in the form of whisky, gin, brandy, sloe gin or liqueur cognac. To correct the acid fermentation and improve the motor function of the stomach a good combination consists of bicarbonate, and 15 or 30 grains of aromatic chalk in a glass of milk about half an hour before meals, and a double dose at bedtime; often smaller doses suffice. An excellent stomachic of calcium chlorid hydrochloric acid and minute doses of the perchlorid of iron is very useful after meals; a small cholagogue pill should be administered regularly to keep the bowels open; for this purpose an excellent mixture can be made with the sulphate, bicarbonate and salicylate of sodium and liquorice.

It is imperative to get lime into the tissues and to lessen its elimination. For this Barr prescribes freely chlorid of sodium and potassium, sodium bicarbonate, chalk, lactate of lime and calcium glycerophosphate. If it be desired to get calcium rapidly into the tissues it may be given in a very dilute form subcutaneously, say a pint of sterile normal saline solution with 0.05 per cent. of calcium chlorid, and 3 per cent. of syrup of glucose. If the calcium chlorid be administered hypodermically in a concentrated form, it may readily produce gangrene of the skin and adjacent tissues. Iron is best administered in the form of underdone red meat, and yolk of eggs; arsenic, potassium iodid, guaiacol, and a host of remedies commonly prescribed are worse than useless.

Leukorrhea should be treated with injections, and any infection of the urinary tract should receive attention. Here vaccines will often prove useful, and the same may be said for pyorrhea alveolaris. General massage improves nutrition, and is highly beneficial; the hot air and electric light baths applied to affected joints often give much relief, but can scarcely be looked on as curative agents. Encourage the patient to take a fair amount of exercise short of fatigue when the disease has subsided, and to live hygienically.

3. **Types of Organism in Bone and Joint Tubercle.**—The proportion of bone and joint cases examined by Fraser was practically equal—thirty-nine were instances of joint disease, thirty-one of bone disease. The age incidence was absolutely limited to 12 years and under. In forty-one instances the bovine bacillus was present, in twenty-six cases the human bacillus occurred, and from the remaining three cases both human and bovine types were isolated. As a matter of routine, the family history was noted in each case investigated. In twenty-one instances there was a definite history of pulmonary tuberculosis having occurred in some member of the family in which the child lived, and in 50 per cent. of these cases the child was actually living in contact with a consumptive. The practical bearing is more evident when it is stated that out of the twenty-one above mentioned cases fifteen, or 71 per cent., were due to the bacillus of human tuberculosis. In fifty-two cases there was definitely stated to be no family history of tubercle; forty-three of these were bovine in origin, while only nine, or 17 per cent., were human. The difference is very striking, and the figures of the first group are explained by direct infection of the child from the consumptive patient with whom it stayed.

Practically speaking, Fraser says that the bovine bacillus is introduced into the body by a single route—that of infection from the alimentary tract, and the medium by which it is introduced is infected milk. As far as possible observations were noted of the source of milk supply in each of the above cases; twenty-five patients were nourished in infancy on

human milk, forty-one were entirely fed on cow's milk; in three instances the source of origin was doubtful. Of the twenty-five patients brought up on human milk, in only six cases was the bovine bacillus found. The remaining nineteen were infected with the human type. In the second group, those nourished on cow's milk, out of a total of forty-one, no less than thirty-seven were due to infection with the bovine bacillus. The remaining four were human. In the complete series there were four children less than 1 year old. All these children were nourished on cow's milk, and in every case the bovine bacillus was the organism present. It is interesting to note that in no instance was any attempt made to sterilize or pasteurize the milk.

Clinical Journal, London

March 26, XLI, No. 25, pp. 385-400

8 Abdominal Injuries. V. Z. Cope.
9 Calculus in Upper Urinary Tract. F. J. Steward.
10 Early Recognition of Pulmonary Tuberculosis. F. J. Wethered.

April 2, No. 26, pp. 401-416

11 Significance of Pain in Ear. M. Yearsley.
12 Calculus in Upper Urinary Tract. F. J. Steward.
13 Ethyl Chlorid Anesthesia. C. F. Hadfield.

April 9, No. 1, pp. 1-16

14 Injuries to Semilunar Cartilages of Knee-Joint. R. Morison.
15 Treatment by Massage and Movement, Particularly in Relation to Fractures. R. C. Elmslie.
16 Diphtheritic Hemiplegia. J. D. Rolleston.

Lancet, London

April 12, I, No. 4676, pp. 1067-1074

17 Relations of Medical Profession and Public. J. A. Lindsay.
18 *Effect of General Contraction of Peripheral Blood-Vessels on Mouse Cancers. C. Walker and H. Whittingham.
19 Treatment of Large Hernia. A. E. Barker.
20 Three Cases of Polycythemia. T. K. Monro.
21 *Series of 236 Cases of Total Enucleation of Prostate Performed during Two Years, 1911-12. P. J. Freyer.
22 Congenital Stricture of Lower End of Esophagus. R. Morison and H. Drummond.
23 *Records of Four Unusual Recoveries in Cases of Mental Disease. L. C. Bruce.

18. Artificial Contraction of Peripheral Vessels in Mouse Cancers.—The authors used pituitary extract and an ergot preparation. These two substances produced somewhat similar results to the substances used by Wassermann and by Neuberg and his collaborators. In the case of the pituitary extract, where the dose was larger and more injections were given, necrosis was induced as well as hemorrhages, and the growth of the tumor was apparently checked in a large proportion of cases. The authors suggest that in view of their experiments the probable explanation of the results obtained with the other substances used by Wassermann and Neuberg and his collaborators is a mechanical one, although, as the substances they used were highly toxic, their results, in the case of the animals that survived the treatment, were more perfect. They believe that it is possible that something might be done toward producing an effect on cancer cells by injecting substances which will tend to kill the cells, in combination with something which will contract the blood-vessels of the body. The passive dilatation of the vessels in the tumor should collect the toxic substance there, though, of course, it will be diffused over the whole body to a less extent. There is no evidence that Wassermann's or any of the other substances used have any specific action on cancer cells, as the contraction of all the blood-vessels excepting those in the tumors accounts for all the results that have been obtained.

21. Total Enucleation of Prostate.—Reviewing briefly his experience of this operation to the end of 1912, comprising 1,036 cases, Freyer states that the patients varied in age from 49 to 90 years, with an average age of 69¼ years. There were among them sixty-five octogenarians and eleven bordering on this age—viz., 79 years. The prostates removed ranged from ½ to 17 ounces in weight, the approximate average being 2¾ ounces. Though the patients were, of course, mainly drawn from the British Isles, practically every nation and race on the face of the earth are represented. The great majority had been dependent on the catheter for periods ranging from a few days to twenty-four years. Most of them were in bad health and many were apparently moribund when the operation was undertaken. Few of them were free from one or more grave complications, kidney affections resulting from backward pressure on those organs and predominating. In the larger number existence was rendered so painful and miserable that they were prepared to face any risk from operation provided they could be assured that in case of survival they could dispense with the catheter.

In connection with these 1,036 operations there were fifty-seven deaths, or 5½ per cent., the remaining 979 cases, with the exception of one case, being completely successful. In only this one case has the patient failed to regain the power of voluntary micturition, and in this instance the bladder was quite flaccid and seems to have been completely paralyzed by the extreme overdistention by the urine before the catheter was employed. With experience the mortality has gradually diminished from about 10 per cent. in the first 100 cases to a little over 4½ per cent. in the last 400. The causes of death were: uremia due to chronic kidney disease, 24; heart disease, 9; shock, 7; exhaustion, 3; septicemia, 3; mania (hereditary in one case), 2; malignant disease of the liver, 2; bronchitis, 2; pneumonia, 1; heart-stroke, 1; pulmonary embolism, 1; cerebral hemorrhage with paralysis, 1; and acute pancreatitis, 1.

In 100 cases the prostatic disease was complicated by the presence of stone in the bladder, mostly of the phosphatic variety due to cystitis. The operation in these cases partook of a dual character—prostatectomy in addition to suprapubic lithotomy. Among these there were 16 deaths (all of which have been accepted as resulting from the prostatectomy part of the operation), or 8.42 per cent. Among the remaining 846 cases uncomplicated with stone there were forty-one deaths, or 4.84 per cent., so that the mortality among the former was nearly double that among the latter. Freyer states that one of the most satisfactory features of this operation is that the patients, as a rule, state, after the lapse of months or even years, that they feel from ten to twenty years younger than before the operation. This remarkable rejuvenescence has so much impressed him that, apart from the physical pain and mental depression caused by the obstructive symptoms, he is persuaded that the enlarged gland pours into the system some internal secretion of a toxic or deleterious nature.

23. Recoveries in Mental Disease.—The records of Bruce's cases are of interest in so far that they demonstrate that even apparently hopeless cases of nervous and mental disease can never be safely pronounced incurable. CASE 1.—Patient, male, aged 30, labors under a mild type of imbecility, and was up to eight years ago a confirmed epileptic. His epileptic seizures commenced during infancy. When he first came under Bruce's care in 1899, and up to 1904, his epileptic seizures were very frequent, averaging between 200 and 300 each month. The fits were both diurnal and nocturnal. During 1904 certain serum observations were made in order to test a statement made by Ceni to the effect that the serum of epileptic patients when taken from the body develops certain antibodies which when injected subcutaneously into the patient yielding the serum, or into other epileptic patients, have a curative power. The patient was asked to give serum for the purposes of the observation. This he readily agreed to do. During a period of six weeks blood to the amount of 40 c.c. was drawn from the median basilic vein once a week, so that during the six weeks he yielded 240 c.c. of blood. The curious fact is this, that from the day of the first bleeding up to the present (that is to say, during a period of eight years) the patient has never again suffered from a single epileptic seizure.

CASE 2.—Patient was a woman of 57 when she first came under Bruce's care. She suffered from recurrent attacks of *folie circulaire* mania with barely recognizable periods of depression. Each of the attacks of excitement lasted about six weeks, with varying intervals of sanity. Her first attack of excitement occurred when she was 27 years of age. During 1902 1903, 1904 and 1905 she suffered from frequent attacks of mania, the onset of each attack being preceded and accompanied by an attack of nasal catarrh. She presented no other physical symptoms beyond a recurrent hyperleukocytosis of from 12,000 to 20,000 per cm. which accompanied the attacks,

and the presence of a specific agglutinin in her serum to a variety of streptococcus isolated from the blood of a case of acute mania. Her opsonic index to the same organism varied between 0.4 at the commencement of an attack to 2 at the termination of an attack.

Various attempts were made by means of injections of this streptococcus to produce immunity, but without effect, and no antibacterial substance could be demonstrated in her serum as the result of these injections. In October, 1905, it was decided to try the effect of feeding the patient on living cultures of the streptococcus which her serum agglutinated. The organism was grown in sterilized broth for forty-eight hours at 37 C. and then dispensed in 10-ounce bottles, of which she took one ounce thrice daily between meals, and this course was continued for six weeks. During this period her appetite and weight increased very markedly. At the end of the six weeks' course of treatment her serum was tested for immune body and was found to contain a specific bacteriolytic substance, which was demonstrated as follows: One part of a twenty-four hours' broth culture of the streptococcus was mixed with two parts of her serum; the mixture was drawn into a sterile pipet, which was sealed and placed in the incubator at 37 C. for three hours. A control of the serum of a healthy person was made at the same time. At the expiration of the three hours the contents of each pipet were spread on agar tubes and incubated. At the end of twenty four hours' incubation it was found that in the tube inoculated from the patient's mixture of serum and broth culture there were only three colonies of organisms visible, while that inoculated with the pipet made from the control serum showed countless colonies. To prevent error the observation was repeated with a second control with the same result. From the date of treatment in October, 1905, to the date of discharge, December, 1907, the patient never suffered from another attack of mania, and up to the present time she has not had a relapse.

Case 3.—Patient, a woman aged 32, developed melancholic symptoms, with fixed delusions and marked impairment of nutrition at 30. She presented no physical disorder beyond the condition of malnutrition, a dry harsh skin, want of appetite, constipation and an irregular hyperleukocytosis of from 12,000 to 17,000 per c.m., the increase being chiefly in the polymorphonuclear cells. All sorts of remedies were applied in her case; she was treated with thyroid, hot baths, injections of cinnamate of soda and various vaccines with practically no effect. At the end of March, 1910—i. e., four years after the onset of her illness—she contracted scarlet fever. The fever was of a mild type with little constitutional disturbance, the highest temperature recorded being 101 F. As she convalesced from the fever a marked physical and mental improvement was noticeable, and by the end of April she had recovered. She has shown no signs of relapse up to the present time.

Case 4.—A woman, aged 27, became insane in May, 1904. She was morose, impulsive, absolutely intractable. She suffered from delusions of identity. At frequent intervals she was impulsive, suddenly attacking fellow patients or members of the staff, and these attacks were, so far as one could judge by her disjointed speech during these outbursts, directly the result of the delusions of identity she labored under regarding the persons she assaulted. No change was noted in her condition until May 5, 1908, when she was reported as having been found in an unconscious state in her bed in the morning. On examination she presented all the symptoms of a cerebral hemorrhage being completely paralyzed on the right side. When she recovered consciousness it was also noted that she was aphasic. Following on the seizure she developed a high temperature, which ran as high as 104 F., and this pyrexia, which was remittent in character, lasted for three weeks. At the end of the three weeks the paralysis was passing off and the power of speech was returning. Five weeks after the date of onset of the seizure she spoke quite clearly and collectedly. Further inquiries elicited the fact that her mind was a perfect blank for a period of four years—that is to say, from the date of the onset of the attack in May, 1904, to the convalescence from her cerebral hemorrhage in June, 1908. She made an excellent recovery.

Medical Press and Circular, London

March 26, XCV, No. 3855, pp. 321-348

24 Intestinal Obstruction. J. E. Adams.
25 Location of Pus in Hand. A. A. McConnell.
26 Removal of Foreign Bodies from Cornea and Conjunctiva. C. H. May.
27 Syphilitic Disease of Bones and Joints in Children. O. L. Addison.
28 Spinal Analgesia—Development and Present Status of Method; with Brief Summary of 1,065 Cases. W. S. Bainbridge.

April 2, No. 3856, pp. 349-374

29 Extra-Uterine Pregnancy. H. R. Andrews.
30 Diagnosis, Prognosis and Treatment of Neurasthenia. J. S. R. Russell.
31 Tabes Dorsalis Without Lymphocytosis. T. A. Williams.

April 9, No. 3857, pp. 375-402

32 Extra-Uterine Pregnancy. H. R. Andrews.
33 Early Diagnosis of General Paralysis. G. M. Robertson.
34 *Gonorrheal Vaginitis Treated by Vaccine. G. Fitzgibbon.
35 Treatment of Cancer by Colloid Copper. G. Herschell and R. J. Cowen.

34. Gonorrheal Vaginitis Treated by Vaccine.—Of Fitzgibbon's six gonococcal vaginitis patients, three were children, one an adult with recent infection, probably of not more than four weeks' duration, and two were adults with chronic infection, which had existed for at least twelve months. Four of the cases cleared up uninterruptedly from the beginning of treatment, the other two improved but again relapsed; one of these finally became perfectly cured in so far as the absence of any sign of inflammation or discharge for a period of two months after cessation of treatment can be considered proof of cure. The sixth case became perfectly clear of inflammation and free from discharge for three weeks, but again relapsed and is still under treatment. Besides the treatment by vaccine inoculation, Fitzgibbon regularly carried out local treatment every second day in the early cases until there was a marked improvement as shown by the decrease of discharge and inflammation, and twice a week after that until cured, and he believes this is important and necessary—certainly in the chronic cases, as there is generally a condition due to mixed infection. In the case of children the infection may be, and often is, one of pure gonococci, and in these vaccine may be sufficient alone; but Fitzgibbon prefers to combine it with local treatment in the form of antiseptic swabbing and douching.

The local treatment he used in all cases was biniodid of mercury, 1:500 to 1:1,000, swabbed thoroughly through a Ferguson's speculum, or in the case of children douched through a speculum; and when there was erosion of the cervix the application of pure phenol. In one acute case in an adult he commenced by tamponading the vagina with iodoform gauze every second day for the first ten days, leaving the gauze in place for twenty-four to thirty hours. Fitzgibbon does not consider that the particular form of local treatment which he adopted has any special benefit in itself beyond promoting and maintaining a cleaner condition of the parts than would exist without it, and in being germicidal to other organisms which may be present in cases of mixed infection, but he thinks some local treatment on these lines should be regularly adopted.

Annales de Gynécologie et d'Obstétrique, Paris

March, XL, No. 3, pp. 129-192

36 Histologic Study of Ovarian Pregnancy. (Les Grossesses ovariennes jeunes.) H. Paucot and A. Debeyre.
37 *Danger in a Future Pregnancy Another Argument in Favor of Nephrectomy for Unilateral Tuberculosis of the Kidney A. Spire and A. Beckel.
38 Roentgentherapy of Uterine Fibroma. (Traitement des fibromyomes de l'utérus par les rayons x.) D. Chiladitis and G. Stavrides.

37. Nephrectomy from Obstetric Standpoint.—Spire and Beckel report experiences from their own practice and that of others showing that nephrectomy does not seem to affect the course of pregnancies later. Andrews has reported a case in which the woman passed through five pregnancies after nephrectomy, and Hartmann has reported 150 pregnancies in 115 women after nephrectomy with only three deaths; in two of the fatal cases the remaining kidney was known to have been diseased. In their three personal cases there was no trace of

albuminuria at any time during the pregnancy, delivery occurring without difficulty from twenty months to three years after the operation. Nephrectomy has been done in the course of a pregnancy in several cases without interrupting it. The fact that a pregnancy later is not interfered with by the absence of one kidney they regard as another argument in favor of operative treatment of unilateral renal tuberculosis. The pregnancy is almost certain to aggravate a renal tuberculous lesion, while the renal tuberculosis in turn has an injurious influence on the pregnancy. Lactation is contraindicated in case of renal tuberculosis while after nephrectomy there is nothing to prevent the mother nursing her babe.

Archives Générales de Chirurgie, Paris

March, VII, No. 3, pp. 257-384

39 Treatment of Injury of the Venous Sinuses of the Skull. M. Auvray.
40 Modified Technic for Roux' Gastrojejuno-Esophagostomy. O. Uffreduzzi and J. Giordano.
41 Superficial Gangrene After Application of Lead Carbonate Salve. P. Mauclaire.

Archives Générales de Médecine, Paris

March, XCII, No. 3, pp. 197-288

42 *Measurement and Charting of Curvature of the Spine. (Mesure et representation des courbures dans les déviations de la colonne vertébrale.) Vital-Badin.
43 *Artificial Pneumothorax in Pulmonary Tuberculosis. (Le traitement de la tuberculose pulmonaire par la méthode de Forlanini.) E. Leuret.
44 *Respiration Exercises. (La méthode de l'exercice physiologique de respiration et les différentes variétés de gymnastique respiratoire.) G. Rosenthal.
45 *Treatment of Tuberculosis with Attenuated Tubercle Bacilli Treated with Sodium Fluorid. (Immunisation antituberculeuse.) G. Rappin.

42. **Measurement of Scoliosis.**—Badin gives an illustrated description of his "scoliosometer" and emphasizes the importance of the findings for estimation of the primary condition and progress of the curvature.

43. **Artificial Pneumothorax.**—Leuret describes the technic for induced pneumothorax and states that he has been systematically examining all his patients with pulmonary tuberculosis to discover those in whom it might be possible to induce the pneumothorax. He found only twelve in his eighty-six latest cases in which there was any possibility of applying the technic, and in the twelve favorable conditions were encountered in only three. He suggests that it might be wise to extend the application of the method to the chronic form of pulmonary tuberculosis when a severe acute exacerbation in one lung is causing great disturbance which might be temporarily arrested by compressing the lung in this way for a couple of months. His results with the method in general were such that he regards it as being far from suitable for a routine procedure, but in occasional cases it may prove effectual when otherwise the patients are doomed.

44. **Exercises in Breathing.**—Rosenthal emphasizes that the normal functioning of a machine wears it out less than when there is a screw loose or it is out of gear, and with a living machine there is not only the minimum of wear with normal functioning but the normal development of the organ is further promoted thereby. The respiration should be through the nose, ample, complete, rhythmical, and it may often be wise for the physician to give the patient a course of lessons in physiologic breathing, supplemented by general hygiene and means to strengthen the nervous system and harden the muscles and the skin. He has worked out a special system for respiratory exercises.

45. **Vaccination Against and Treatment of Tuberculosis.**—Rappin has reported a number of times on his method of treating and immunizing against tuberculosis by a vaccine made from attenuated tubercle bacilli deprived of their protecting envelop by treatment with sodium fluorid. He has been cultivating since 1894 the strain of bacilli he uses and this is his fourth report on the subject. His experimental research has been extremely encouraging, he says; guinea-pigs bore without harm above the fatal dose of tuberculin when it had been first mixed with his vaccine.

Archives Internationales de Chirurgie, Ghent

VI, No. 1, pp. 1-132. Last indexed Oct. 19, 1912, p. 1192

46 *Horse-Shoe Kidney. C. Beyer Commenced in last volume.
47 An American Surgeon's Opinions of the Open or Operative Treatment of Closed Fractures. J. B. Roberts.
48 *Histogenesis of Experimental Production of a Joint by Interposition of Foreign Body in a Fracture. (L'istogenese della cavita articolari di neoformazione.) G. Bolognesi.

46. **Horse-Shoe Kidney.**—Beyer gives summaries of 264 cases he has found on record and discusses the possible disturbances from this anomaly and the best methods for diagnosis and correction. He emphasizes the importance of suspecting a horse-shoe kidney in all cases of abdominal tumors or urinary disturbances.

48. **Articulations Produced Experimentally in Fractured Bones.**—Bolognesi's article is accompanied by twelve plates showing the processes and tissues involved in the joint-like structure which is liable to develop between the stumps when a foreign body is introduced into a fracture.

Archives des Maladies de l'App. Digestif, Paris

March, VII, No. 3, pp. 121-189

49 Influence of the Bile on Putrefaction in the Intestines. H. Roger.
50 Chronic Amebic Dysentery and its Treatment. G. Friedel.
51 Microscopic Examination of the Stools with the Polariscope. Wassermann and Goldfon.
52 Comparison of Acute Colitis in Children and in Adults. A. Mathieu.

Archives des Maladies du Cœur, etc., Paris

April, VI, No. 4, pp. 225-304

53 *The Diet in Cardiovascular Disease. (Du régime diététique dans les affections cardio-vasculaires.) H. Vaquez.
54 Causes of Flint's Murmur. (Pathogènie du souffle de Flint. (Insuffisance aortique et rétrécissement mitral relatif.) M. Carrieu and J. Anglada.
55 *Secondary Polycythemia and Heart Disease. (Signification pronostique de la polycythémie secondaire dans les affections cardio-pulmonaires.) F. P. Weber.
56 Necessity for Identical Conditions in Comparing Blood-Pressure Findings. (Des mensurations de pression dans les artères des membres inférieurs.) J. Heitz.

53. **The Diet in Cardiovascular Disease.**—Vaquez expatiates on the importance of modifying the diet to meet the indications in each case so as to relieve the system of all extra work and spare weak organs. We now are able to determine with precision the exact articles of food which can or cannot be eliminated with ease and those which the organism is unable to eliminate in certain conditions. We should not be guided by empiricism but by clinical observation and laboratory findings. The Karell diet is an example of empiric inaccuracy: By restricting the patient to milk alone and very little of that, we of course save the patient from the effects of ingestion of salt and of too much fluid and nitrogenous substances. The patients benefit by this but they suffer from the inadequate nourishment, and those who are able to take care of salt or fluids or nitrogenous substances, as the case may be, do not need this wholesale deprivation. He says it reminds him of Lauder Brunton's remark that physicians sometimes hide their inexperience behind a shotgun prescription thinking that the more substances they prescribe the better chance there is of some one of them answering the desired purpose. By reducing at the same time the intake of fluids, of sodium chlorid and of albumin, Karell and his imitators seem to apply this same principle. We should distinguish between the patients who need to have the intake of fluids reduced and those who are unfavorably affected by salt or by albumin. Vaquez adds in conclusion that those physicians who say that dieting in heart disease is nonsense, generally are blessed with unusually good stomachs themselves. By determining in each individual case the exact restrictions which it is necessary to impose and which can be avoided, the rest of us show evidence of a good heart at least.

55. **Secondary Polycythemia and Heart Disease.**—Weber reports eleven cases of polycythemia secondary to a cardiovalvular affection. He regards it as a sign of serious conditions when it is accompanied by severe cyanosis. Prolonged rest in bed and small doses of potassium iodid, heart tonics, diuretics and expectorants, oxygen and venesection may prove useful.

Archives de Médecine des Enfants, Paris

April, XVI, No. 4, pp. 241-320

57 The Blood and the Bone Marrow Changes in Infantile Scorbutus. (Hématologie et altérations ostéo-médullaires dans la maladie de Barlow.) P. Nobécourt, L. Tixier and Maillet.

58 *Acute Colitis in Children. V. Hutinel and P. Nobécourt. Commenced in No. 1.

59 Remineralization in Treatment of Pulmonary Tuberculosis in Children. (Traitement de la tuberculose pulmonaire de l'enfant par la méthode de Ferrier.) Gaillot.

58. **Acute Colitis in Young Children.**—Hutinel and Nobécourt emphasize the importance of prophylaxis of intestinal derangement by general hygiene of the diet, avoiding abuse of eggs, milk and meat, treating constipation and stimulating the digestive glands and the liver and nutrition in general, regulating functioning of the nervous system, disinfecting the throat and keeping the children away from contact with others suffering from enteritis. They do not regard infection as the cause of acute colitis in young children but as the result. In treatment the aim should be to clean out the intestines and stomach and modify the mucosa. When the acetone odor of the breath, the constipation and fetid stools warn of the acute colitis, nothing but water should be allowed the child. The stomach and intestines should be cleared out by lavage and sodium sulphate should be given; from 5 to 15 gm. the first day and then from 1 to 5 gm. daily for a week. Castor oil may also be needed. Abdominal pain is relieved by moist heat or the ice bag or a small enema of one or two tablespoonfuls of water with from one to three drops of laudanum. To modify the mucosa, small hot enemas of silver nitrate at 0.2 per thousand or of ipecac, 1 or 2 gm. of powdered ipecac infused in 200 gm. of boiling water. Or the ipecac can be taken by the mouth in the dose of from 0.2 to 1 gm. infused in 100 or 200 gm. of sweetened water. A teaspoonful of this infusion is given every two hours until the stools grow more normal. The child should be allowed nothing but an occasional sip of ice water if there is much vomiting. If not, ordinary water or Heim and John's solution: 5 gm. sodium chlorid and 5 gm. bicarbonate to the liter of water. This restriction to water alone is maintained for from two to six days or more. Feeding is then commenced cautiously with rice water or barley water or a vegetable bouillon; then follow with tapioca or soft mashed potato or even chicken broth free from fat. Milk should be resumed later and very cautiously; it is better to give it cooked in a gruel than as milk. In severe cases buttermilk may be preferable. Not until recovery is complete should meat or eggs be allowed and then very cautiously, one egg yolk in a pudding. Colitis as a mere complication of an infectious disease and not due to errors in diet does not require such strict dieting. The digestion during convalescence should be stimulated with Vichy water which acts on the liver, pancreatin, or extract of bile or of the gastric juice, according to the individual conditions; epinephrin may be useful. Serotherapy is not required in this form of colitis. The symptoms with acute colitis show the multiple factors at work, the general infection, the intoxication from the abnormal products being generated in the intestine, the organic injuries resulting from this toxic action, the defective digestion and assimilation of the food, and possibly also anaphylaxis phenomena. The child must be carefully supervised afterward that chronic colitis may not become installed. Older children may develop a chronic mucomembranous colon affection, of primary inflammatory origin, the same as adults.

Bulletins de la Société de Pédiatrie, Paris

March, XV, No. 3, pp. 169-292

60 *Sugar in Treatment of Uncontrollable Vomiting in Infants. (La modification du lait par l'hypersucrage—saccharose—dans les dyspepsies infantiles.) Variot, Lavialle and Rousselot.

61 *Treatment of Scoliosis from Malformation of Fifth Lumbar Vertebra. Nageotte-Wilbouchewitch.

62 *Infant Wards in Public Hospitals. (Rapport sur les améliorations à apporter au fonctionnement des crèches d'hôpital.) H. Triboulet.

63 *Abscesses in Pott's Disease. (La fréquence de l'abcès dans le mal de Pott dorsal.) C. Roederer and A. Weil.

64 Congenital Scoliosis. Lance.

60. **Sugar in Treatment of Uncontrollable Vomiting in Infants.**—Fifteen new cases are here added to the twenty previously reported confirming the prompt sedative action of much sweetened condensed or ordinary milk on the most tenacious and inveterate vomiting in young infants. Almost the only failure was in a child with congenital stenosis of the pylorus. The milk is heated and about 10 per cent. of sugar is added, to sweeten it about the same as condensed milk. The aspect of the casein in condensed milk and in this highly sweetened milk is entirely different from that of the casein of ordinary raw milk; the aspect is more like that of human milk. There is evidently, it is stated, some chemical action on the albuminoids of the milk from the large sugar content under the action of heat.

61. **Scoliosis.**—This author says that radiography has shown that scoliosis from malformation of the fifth lumbar vertebra can be corrected by raising the foot on the other side. The slanting of the pelvis induced by having the child wear something to raise one foot higher might do harm in older children. This emphasizes the importance of closer study of scoliosis in quite young children to permit proper measures for correction in time. The young and malleable vertebra yields to the action of the weight of the body when the foot is thus raised, gradually restoring the symmetry of the fifth vertebra or developing a compensating malformation in the fourth

62. **Infant Wards in Hospitals.**—Triboulet deplores the high mortality in the infants received into public hospitals, and insists on the necessity for putting an end to the present promiscuous environment. The infant ward should admit only infants with acute infectious disease or affections which cannot be treated elsewhere. No normal infants or subnormal and none with simple malnutrition should be admitted to the hospitals; they should be accommodated elsewhere. As infants are exceptionally susceptible to infection, they should be protected with special care against the numerous microbian contacts of the hospital environment, and hence isolation with the box system for each infant separately is absolutely indispensable. He thinks that there should be a nurse for each three infants in the ward, and pecuniary support should be given to the families who take their convalescent infants home early. The hospital infant ward should be only for cases requiring a brief stay.

63. **Abscesses in Pott's Disease.**—Roederer and Weil during the last two years have been systematically examining with the Roentgen rays every child with tuberculosis of the spine, and they have been surprised at the large proportion of cases in which shadows were found around the vertebral focus. In some, the Pott's disease was of long standing, in others of recent date, and in others merely suspected. They give several radiographs and call attention to the ease with which these abscesses can be detected by radioscopy before they induce any symptoms. These findings also emphasize the necessity for prolonged supervision after apparent healing of a vertebral process; with the present technic it is impossible to distinguish by radioscopy between incipient and florid abscesses or the cicatricial changes left after healing of an abscess in this region.

Journal de Médecine de Bordeaux

March 30, XLIII, No. 13, pp. 195-208

65 *Tardy Recurrence of Uterine Cancer. A. Charrier and A. Parcelier.

66 Workmen's Compensation. (Les expertises en matière d'honoraires d'accidents du travail.) H. Verger and others.

April 6, No. 14, pp. 209-224

67 *Ipecac in Digestive Disturbances in Young Children. (Des remarquables effets de l'ipéca à toutes petites doses dans certains troubles digestifs tenaces de l'Enfance.) R. Saint-Philippe.

68 *Treatment of Postoperative Peritonitis. Colin.

65. **Recurring Cancer of the Uterine Cervix.**—In the case reported in a woman of 35 a typical cauliflower cancer of the cervix filled almost the entire vagina and immobilized the uterus. A palliative vaginal hysterectomy seemed to cure the patient entirely, and she was free from all symptoms for nearly ten years when she succumbed to a recurrence. This case is cited as another illustration of how little we really know of cancer. We cannot explain why after extensive rad-

ical operations apparently eradicating the last trace of malignant disease, the patients die from recurrence within six or eight months, while in other cases a merely palliative intervention permits long years of survival. Theilhaber thinks that it may be possible to stimulate the defensive processes by the regeneration which follows venesection, and consequently he now as a routine procedure draws from 400 to 500 gm. of blood a week after every operation for cancer.

67. See the Paris Letter in THE JOURNAL, April 19, 1913, p. 1239. Also abstr. 58 above.

68. **Postoperative Peritonitis.**—Colin reports a case of this kind in which the two special dangers of peritonitis were particularly imminent, that from the toxic microbian secretions and that from the gastric auto-intoxication. He sought to attenuate the first by injecting 2 gm. of camphor every day into the peritoneum, in oil, striving to exert a kind of embalming action on the tissues. Camphor paralyzes the microorganisms and permits the phagocytes to attack them, no longer repulsed by the toxins secreted by the infecting agent. The camphor treatment was supplemented by very hot wet packs. He ascribes to the hot packs various phenomena of reflex vasodilatation, thus inducing hyperemia. To reenforce this action he made subcutaneous injections of sodium nucleinate which, according to Chantemesse, attracts leukocytes into the omentum. All these measures were supplemented by general tonic measures, injections of saline, etc., to promote diuresis and strengthen the heart. The gastric auto-intoxication was warded off by repeated lavage of the stomach. This relieved the patient immediately, arrested the pain, and put an end to the vomiting, thus arresting the violent contractions of the diaphragm which have such an injurious action on the intestines and spread the pus. He refrained on principle from morphin which paralyzes the omentum and reduces its bactericidal power and from ice which induces vasocontraction and checks the circulation in the region while leaving the lymphatics open for absorption. He declares that the lymphatics escape the action of vasoconstriction, their anatomy differing from that of the blood-vessels. One case is scarcely sufficient to base conclusions on, but his success in arresting the extremely severe diffuse peritonitis in this case in less than twenty-four hours he thinks is worthy of attention.

Lyon Chirurgical, Lyons

April, IX, No. 4, pp. 353-460

69 *Treatment of Undescended Testicle. (Un procédé nouveau de cure radicale de l'ectopie testiculaire.) P. Gorse and Swynghedauw.

70 *Ligneous Tuberculosis of the Thyroid. (Tuberculose thyroïdienne folliculaire à forme de thyroïdite ligneuse.) L. Tixier and P. Savy.

71 Lesions in Stomach Walls Secondary to Perigastritis. (Les lésions du muscle gastrique consécutives aux perigastrites. Leurs rapports avec les troubles de la motricité stomacale.) L. Bérèel and C. Gardère.

72 Fracture of the Malleolus. (La troisième malléole.—Fracture marginale postérieure.) E. Destot. Commenced in No. 3.

73 Nephrectomy for Polycystic Kidney. Cured to Date (4½ Years). L. Desgouttes and R. Olivier.

74 *Appendicitis from Helminths. C. Garin and A. Chalier.

69. **Treatment of Undescended Testicle.**—Gorse and Swynghedauw have applied in nine cases with most excellent results a radical method of correcting ectopic testicles which seems to be applicable in every case. They first incise the scrotum and introduce a large glass marble in case of children or a china egg for an adult, and suture the skin over it. This is worn for two months; by the end of this time the scrotum has been prepared so that the testicle when it is brought down into it will find a practically normal bed and will have no tendency to slide upward. The objection that the operation is done at two sittings with such a long interval is comparatively insignificant as the patients in these cases are generally children and the long interval is of little moment. They do not have to stay in bed, but of course have to keep quieter than usual while wearing the smooth foreign body.

70. **Ligneous Tuberculosis of the Thyroid.**—Tixier and Savy report a case and summarize four from the literature in which the thyroid became the seat of a follicular ligneous tuberculous process. The patients were three women and one man, all over 40, and a child of 2. The process developed in the course of a few months, afebrile, and causing functional disturbance interfering with the voice and breathing. In one of the cases there was severe pain radiating to the back of the neck; in another there was pronounced cachexia, but in the case reported in detail there was neither pain nor cachexia. The tumefaction is not considerable but the hard, solid consistency is striking; the tumor is adherent and is sometimes accompanied by enlargement of the submaxillary lymph-nodes. Cancer is generally suspected. With a syphilitic process in the thyroid there may be the same woody mass but the history of the case and other manifestations of syphilis, the benefit from mercurial treatment and the Wassermann reaction readily differentiate syphilitic thyroiditis. In the case reported the positive tuberculin reaction, enlarged lymph-nodes and suspected tuberculous affection of the apices served to confirm the diagnosis of tuberculosis although the tubercle bacilli have never been found in a case of this kind. The trouble seems to be primary and the prognosis unfavorable. Bruns' patient recovered after removal of the tumor, but Camara's succumbed to the progressive cachexia and in the case reported the patient seemed to be doing well after removal of the enlarged thyroid but dyspnea returned a few days later without known cause. A secondary tracheotomy tided her along for a time after the tracheotomy wound had healed, but there was still a little difficulty in breathing and she died suddenly in the night a few weeks later. Nothing was found to explain the fatality. The thyroid seems to be only rarely the seat of primary tuberculosis; Arnd was able to compile only forty-four cases from the literature, but our increasing knowledge in regard to "inflammatory tuberculosis" suggests that this occurs more often than hitherto deemed possible.

74. **Oxyuris Appendicitis.**—Garin and Chalier add another to the list of cases of chronic appendicitis from the presence of helminths inoculating the walls with virulent germs. They urge the pathogenic importance of helminths from this point of view, and the necessity for detecting their presence by examination of the stools in all cases of chronic abdominal trouble.

Lyon Médical, Lyons

March 30, XLV, No. 13, pp. 665-732

75 Epilepsy in Course of Typhoid. F. Mouisset and L. Folliet.

76 Hour-Glass Stomach. (Les différentes formes de la bi'oculation gastrique et leur diagnostic radiologique.) Barjon.

April 6, No. 14, pp. 733-776

77 Correction of Deformity of the Nose. (Corrections des difformités du nez par opérations intra-nasales et inclusions prothétiques.) Garel and Gignoux.

78 Sero-Agglutination of the Pneumobacillus. M. Petzetakis.

Presse Médicale, Paris

April 2, XXI, No. 27, pp. 261-272

79 Technic for Salvarsan. (Injections intramusculaires huileuses d'arséno-benzol dans le traitement de la syphilis.) F. Balzer.

80 Importance of Salkowski and Kojo Urine Test for Diagnosis of Cancer. (Valeur clinique que le dosage de l'azote colloïde urinaire offre pour le diagnostic du cancer des viscères.) V. P. Semionow.

81 Congenital Stenosis of the Esophagus. Guisez.

April 5, No. 28, pp. 273-284

82 Toxemia with Asystolia. Debove.

83 Restriction of Intake of Fluids in Management of Abnormally High Blood-Pressure. (Restriction des boissons dans la cure des hypertensions vasculaires.) A. Martinet and F. Heckel.

84 Stovain-Strychnin Spinal Anesthesia. (503 cas de rachianesthésie par la méthode du professeur Jonnesco.) Dimitrion and Saghinesco.

Revue de Chirurgie, Paris

March, XXXIII, No. 3, pp. 293-427

85 *Cancer of the Tongue Under Age of 30. (Le cancer de la langue chez les jeunes sujets.) M. Gorse and Dupuich.

86 *Inflammatory Tuberculosis. (La tuberculose inflammatoire. Ses manifestations chirurgicales.) G. Cotte and H. Alamartine.

87 Occupational Aneurysm in File-Grinders. (Anévrisme professionnel de l'arcade palmaire superficielle.) J. Regnault and R. Lacouture.

88 *Necessity for Avoiding "Dietetic Shock" in Operative Cases. (Recherches sur la nutrition des anesthésiés et des opérés.) E. Chauvin and S. N. Oeconomos.

85. **Cancer of the Tongue in the Young.**—The case is reported of an epithelioma of the tongue in a young soldier. Thirty cases are on record of cancer of the tongue in eight males and twenty-two females between the ages of 11 and 30. Irritation from the jagged edge of a tooth is an important factor confirmed by the location on the edge of the tongue. There was no suggestion of syphilis except mere suspicion in two cases. Recurrence is more liable in the young; only one case of long survival is known and of two years to date in another case.

86. **Inflammatory Tuberculosis.**—Cotte and Alamartine discuss the surgical aspect of tuberculous lesions of inflammatory nature without the specific lesions of tuberculosis. It is impossible to produce such attenuated lesions in experimental work as in this form of bacillosis in man. They discuss the involvement of the joints and bursae, bones and fibrous tissue, gastro-intestinal tract and genital organs. Any and all tissues are liable to be the seat of this inflammatory tuberculosis and entail defective development and modify the internal secretions. In nineteen patients with infantile genital organs, Hegar noted tuberculous antecedents in nine and acquired tuberculosis in two; Meyer found twenty-three with an inherited taint and nineteen with acquired tuberculosis in sixty cases of infantile genital organs, and Merletti found eighty cases with infantile uterus among 500 tuberculosis cadavers. The inflammatory tuberculosis may cause acute congestions or chronic changes of the sclerosis type or there may be neoplasm formations in which the absence of specific characteristics misleads as to their true nature. Until we are better posted on the subject, further research can be only along the lines of recording clinical coincidences: This alone reveals the true nature of the bacillosis in its most attenuated forms and atypical manifestations.

88. **The Dietetic Shock with Operations.**—Chauvin and Oeconomos report extensive research on the metabolism before, during and after general anesthesia which has confirmed the remarkable effect on the kidney functioning. The urine becomes pathologic in two directions; all the nitrogenous products become increased, evidently from exaggerated destruction of the albuminoid molecule, and, secondly, there is an almost constant and very pronounced acidosis manifested by the increase in ammonia, acetone, etc., pouring into the blood-stream quantities of toxic products. They call attention to the significant fact that these disturbances are observed whatever the anesthetic employed and whatever the mode of administration, inhalation, spinal anesthesia or local cocain anesthesia. The same disturbances are observed likewise after fasting when there has been no anesthesia nor operation. They have concluded that these disturbances are due in large measure to the restriction of the diet, preliminary to and following a major operation. Besides the operative shock and the shock of the anesthesia, we must reckon with the dietetic shock. The latter can be avoided, they state, and report experiences which show that the patients can be tided along past this phase by giving a simple and easily digested carbohydrate, such as glucose. They found most useful a mixture containing 150 gm. glucose, 6 gm. tincture of cinnamon, and 0.5 gm. tincture of nux vomica with water to make 300 gm. This mixture was taken the day before the operation and the three following days, and the urine showed none of the above pathologic changes.

Revue de Gynécologie, Paris

February, XX, No. 2, pp. 113-224

89 Radiotherapy of Uterine Fibromas. A. Sirodey.
90 Information to be Derived from the Urinary Apparatus as Guide to Operability of Cancer of the Uterus. H. Violet and J. Murod.
91 Intermittent Distention of the Inflamed Appendix; Eleven Cases. (De l'hydro-appendicitose.) E. Duroux.

Semaine Médicale, Paris

April 2, XXXIII, No. 14, pp. 157-168

92 The Cerebrospinal Fluid in Meningeal Disease. (Que faut-il penser des prétendues erreurs de formule cytologique du liquide céphalorachidien dans les affections méningées?) E. E. Gaujoux

Beiträge zur klinischen Chirurgie, Tübingen

March, LXXXIII, No. 2, pp. 225-450

93 *Experimental Production of Goiter. (Versuche über künstliche Kropferzeugung.) K. Blauel and A. Reich.
94 Tardy Hemorrhage with Appendicitis. Hauch.
95 Diverticulum in the Bladder. (Die radikale Behandlung angeborener Blasendivertikel.) J. M. van Dam.
96 Dermoids of the Floor of the Mouth. (Die Mundbodendermoide.) R. Hassel.
97 Dislocation of the Knee. (Luxationen im Kniegelenk.) W. Hering.
98 Hernia of the Ovaries and Tubes. (Ueber sog. eingeklemmte Hernien der Adnexe.) A. L. Matthey.
99 Functional and Anatomic Regeneration of Common Bile Duct After Introduction of a T Tube. K. Propping.
100 The Clinical Picture of Fetal Chondrodystrophy. W. Jaroschy.
101 Successful Transpleural Resection of a Carcinoma in the Cardia. J. H. Zaaijer.
102 *Coasting and Ski Accidents. (Verletzungen beim Wintersport.) O. Bernhard.

93. **Experimental Production of Goiter.**—Blauel and Reich report extensive experimental research and review the literature, their conclusions harmonizing with those recently published from Wilms' clinic, obtained by a different method.

102. **Coasting Injuries.**—Bernhard reviews the experiences in the Engadine in the winters 1886-1913 with skating, coasting, ski jumping, etc. Each of these winter sports has a typical set of accidents to which it is liable. He says that the number of accidents is comparatively small, however, and their gravity is generally overrated. He describes the technics found most useful in treating the various types of fractures.

Berliner klinische Wochenschrift

March 31, I., No. 13, pp. 573-620

103 Present Status of Treatment of Syphilis. (Die jetzigen Heilmittel der Syphilis und ihre Anwendung in der Praxis.) K. Touton.
104 Localization of Oxygen in Animal Tissues. (Tatsachen über die Reduktionsorte und Sauerstofforte des tierischen Gewebes.) P. G. Unna.
105 *Duodenal Ulcer in Infants. (Das Ulcus rotundum duodeni im ersten Lebensjahr.) W. Schmidt.
106 Surgery of the Spinal Cord. (Gegenwart und Zukunft der Rückenmarkschirurgie.) M. Rothmann. Commenced in No. 12.

105. **Duodenal Ulcer in Infants.**—Schmidt states that he found a duodenal ulcer in twenty infant cadavers out of 3,824 post-mortems in the last seven years. This represented 1.8 per cent. of the 1,109 child cadavers. The age ranged from five days to eleven months. In 2,715 necropsies of older persons he discovered only seventeen cases of duodenal ulcers, including two between 20 and 30; three between 30 and 40; four between 40 and 50, and four between 50 and 60, the other decades being represented by one each. This shows that duodenal ulcer is most prevalent during the first year of life. It was found in infants with rachitis, nephritis and other wasting diseases, including tuberculosis, and in malnutrition in general. In one case two ulcers were found; in one five, and in two instances three, evidently of different ages. In fourteen cases the duodenal ulcer caused absolutely no symptoms during life, and Morot recently stated that in 20 per cent. of his cases of duodenal ulcer in adults the lesion had caused no symptoms. In one child who had died of sepsis from extensive phlegmon of the trunk, the duodenal ulcer was found healed over.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

April, XVI, No. 4, pp. 425-510

107 *Cerebral Syphilis. (Die operative Therapie des Lues des Centralnervensystems.) S. Schoenborn.
108 *Tuberculosis of the Stomach. (Die Tuberkulose des Magens.) D. G. Zesas.

107. **Cerebral Syphilis.**—Schoenborn has been able to find only fifty published articles on operative treatment of syphilitic lesions in the central nervous system, which he here reviews. Analysis of the various reports shows that circumscribed syphilitic changes in the brain and spinal cord are amenable to operative measures the same as inflammatory processes of other origin. The mortality is rather less, and the prospects for recovery are at least as good as with non-syphilitic processes. On suspicion of syphilis, specific treat-

V. 191

ment should be instituted and a vigorous six-weeks course given before considering operative treatment unless there is pressing danger of blindness or a fatal outcome. The results of operative treatment compare very favorably with that with tumors of other kinds, but to date there is no statistical support for the assumption that operative treatment can accomplish more, on an average, than systematic therapeutic measures. There has been no material accumulated to date in regard to operative treatment of diffuse syphilitic processes, although Horsley has recommended it. Neither is there any evidence to date that operative treatment on the whole is more effectual than the usual antisyphilitic treatment. In the literature cited no case of complete recovery is recorded, either with syphilis of the brain or spinal cord. His compiled operative brain cases total thirty-four with a mortality of three, and of two in the nine operative cases of cord syphilis.

108. **Tuberculosis of the Stomach.**—Zesas analyzes 232 articles on this subject, and states that in the thirty-two operative cases recorded four were cured of the eight patients treated by resection, and eleven of the twenty treated by gastro-enterostomy, while all died of the four treated by pyloroplastics or gastrolysis. Gastro-enterostomy is thus shown to be superior to other operative measures in treatment of tuberculosis of the stomach, but the ultimate outcome depends naturally on the stage of the process. There should be no delay after the diagnosis is once certain. Spontaneous healing occurs very rarely but occasionally the stomach affection passes into a mild chronic stage; Margarucci and Hattute have reported survivals of fifteen and eight years. There are no pathognomonic symptoms, and the diagnosis is generally a necropsy surprise. Ordinary gastric ulcer is not rare with pulmonary tuberculosis, and true tuberculous gastric ulcers may be accompanied by hyperchlorhydria and hypersecretion. Hypochlorhydria is also frequent; in Ruge's case not only the clinical picture but the operation and the necropsy findings indicated cancer until the microscope brought the surprise that all the changes noted were of a tuberculous nature. As a rule, gastric cancer develops after forty while gastric tuberculosis generally affects younger persons. Another differential point is that with gastric cancer the pains are independent of the intake of food. Simmonds has reported a case in which both cancer and tuberculous ulcers were found in the dilated stomach. Others have reported tuberculous lesions in the stomach in syphilitics.

Deutsches Archiv für klinische Medizin, Leipsic

CX, Nos. 1-2, pp. 1-188. Last indexed May 3, p. 1402

109 Specific Gravity of the Urine in Various Diseases. (Ueber das spezifische Gewicht des Harns bei Krankheiten, seine Abhängigkeit vom Gesamttrockenrückstand und von einzelnen Bestandteilen des Harns.) L. Jacob.

110 Diaphragm Eventration. (Zur Eventratio diaphragmatica mit elektrokardiographischen Untersuchungen.) P. Baetge.

111 Hemolytic Jaundice. (Zur Frage des "Ictère hémolysinique" —Chauffard.) O. Roth.

112 *Importance of Calcium for the Growth. (Bedeutung des Calciums für das Wachstum.) F. B. McCrudden (New York).

113 Innervation of the Kidney. O. Renner.

114 The Sugar in the Blood during Fever. (Verhalten des Blutzuckers im Fieber.) H. Freund and F. Marchand.

115 *Karell's Method of Treating Cardiovascular Disturbance. (Wert der Karellkur zur Behandlung von Kreislaufstörungen). Wittich.

116 Influence of Ingestion of Food on the Metabolism. (Einfluss des Nahrungsaufnahme auf den Stoffwechsel.) F. G. Benedict (Boston).

117 Erroneous Conclusions from Some Recent Pharmacologic Studies of Digitalis Preparations. (Was bedeuten die neuen Befunde von Gottlieb und Ogawa über die Digitoxresorption für die ärztliche Praxis.) Focke and R. Gottlieb.

118 The Functioning of the Congested Kidney. (Zur Kenntnis der Funktion der Stauungsniere.) W. Nonnenbruch.

119 Importance of the Antibodies in Tuberculosis. (Bedeutung der Antikörper bei der Tuberkulose.) J. Citron and J. Schürer.

112. Reviewed editorially in THE JOURNAL. See also Oct. 19, 1912, p. 1482.

115. **The Value of the Karell Diet in the Treatment in Circulatory Disturbances.**—Wittich discusses the value of the well-known Karell method of dieting in the different varieties of heart disease, on the basis of 100 carefully studied cases. In practically all forms of heart disease he finds a marked improvement in the subjective feeling of the patient. The only real contra-indication to its use is uremia or decided uremic symptoms. The best results are observed in cases of heart insufficiency due to simple chronic myocarditis. No medicine at all is required in these cases. The next most favorable group is that showing valvular lesions. Here medicines may sometimes be used as aids with advantage. The cases due to arteriosclerosis are somewhat less favorable, and those caused by nephritis least so, although even here the diet is of great value in conjunction with medical treatment. Where there is a tendency to uremia, the diet should contain little salt, but abundant fluid. The restriction of both fluid and salt is an essential factor in the Karell course. Diuresis is increased, salt elimination favored, dropsy and edema disappear, and, in most cases the blood-pressure is decidedly reduced (The Karell method of dieting—the Karell "cure"—was described in THE JOURNAL, Feb. 17, 1912, p. 524. See also Abstr. 53 above.)

Deutsche medizinische Wochenschrift, Berlin

March 27, XXXIX, No. 13, pp. 585-632

120 Talipes. (Behandlung des angeborenen Klumpfusses.) O. Vulpius.

121 Active Participation in the Circulation of the Blood by the Arteries. (Förderung des Blutstroms durch den Arterienpuls.) K. Hürthle.

122 Benefit from Intravenous Injection of Saturated Solution of Camphor in Treatment of Pneumonia, etc. (Wirkung gesättigter wässriger Kampferlösung.) H. Leo.

123 Serodiagnosis of Leprosy. (Serologische Untersuchungen bei Leprösen.) B. Möllers.

124 From the Seat of War. (Chirurgische Erfahrungen im Deutschen Roten Kreuz-Lazarett in Belgrad.) R. Mühsam, L. Schliep und Lotsch.

125 Emphysema. W. A. Freund.

126 Technic for Examination of the Urine. (Zur Harnanalyse.) E. Salkowski.

127 Roentgenoscopy of the Appendix Shows it Actively Movable. (Der Wurmfortsatz im Röntgenbilde.) M. Cohn.

128 The Physician and Medical Matters in Recent Novels and Plays. (Medizinisches und Mediziner in der neuesten Belletristik.) L. Finckh.

Deutsche Zeitschrift für Chirurgie, Leipsic

March, CXXI, Nos. 5-6, pp. 393-588

129 *Perforated Gastric and Duodenal Ulcer. (Zur Klinik und Therapie des perforierten Magen- und Duodenalgeschwürs.) G. A. Wetterstrand.

130 Supplementary Ureters as Cause for Various Kidney Affections. (Ueber akzessorische Harnleiter.) A. Pawlow.

131 Appendix as Substitute for Bile Duct. (Möglichkeit eines Choledochusersatzes durch Einpflanzung des Processus vermiformis.) Mollneus.

132 The Superficial Nerves in relation to Technic for Local Anesthesia. (Anatomische Untersuchungen einiger für die Lokalanästhesie wichtiger Hautnerven bezüglich ihrer Durchtrittsstellen durch die Fascien.) F. Rost.

133 Hemorrhage in the Pancreas. Knape.

134 Compressed-Air Apparatus for Pressure Massage, etc., in Hospitals. (Der Luftkompressor im Krankenhaus.) F. Kuhn

135 *Bradycardia with Injury of the Liver. S. Rubaschow and H. Finsterer.

136 *Resection of Wrist Bones for Ischemic Contracture. (Eine neue Methode zur operativen Behandlung der ischämischen Kontraktur.) A. Horwitz.

137 Ascaridiasis of the Bile Passages Simulating Cholelithiasis in the Elderly; One Case; Eleven from the Literature. R. Rosenthal.

138 Hypernephroma in the Kidney. H. Harttung.

129. **Perforated Gastric or Duodenal Ulcer.**—Wetterstrand's patients were nearly all men; over 75 per cent. were saved by a prompt operation. The history of the cases showed ulcer symptoms in about 80 per cent. The behavior of the liver dulness is of great diagnostic importance as with air free in the abdominal cavity the area of dulness contract or disappears. The total mortality, 45 per cent., is larger than with appendix peritonitis, but the prospect for a favorable outcome does not diminish so early as in appendicitis.

135. **Bradycardia from Injury of the Liver.**—Rubaschow declares that Finsterer's assertion that bradycardia is an important characteristic of injury of the liver is not correct, and his explanation of a bradycardia with liver injury as due to the action of the bile acids in the blood has not

received corroboration. Finsterer reaffirms the importance of the sign but insists that the bradycardia is only relative. A full, powerful and slow pulse should not be accepted as excluding internal hemorrhage from injury of the liver. This has occurred in several cases on record to the great detriment of the patient.

136. **Ischemic Contracture.**—Horwitz calls attention to the excellent results obtained in Bier's service by operative treatment, resection of the bones of the wrist, lengthening the flexor tendons if necessary. He advises not to waste time on massage and exercise before resorting to operative measures. The aim should be to operate before the muscles have become atrophied. The earlier it is done the less after-treatment is required.

Medizinische Klinik, Berlin

March 30, IX, No. 13, pp. 485-522 and Supplement

139 *Tuberculosis in Children. (Ueber Tuberkulose des Kindesalter.) F. Hamburger.
140 Fracture of Elbow. (Diagnose und Therapie der Frakturen in der Nähe des Ellbogengelenks.) T. Voeckler.
141 Radium Emanations in Therapeutics. (Ueber die Aufnahme von Radiumemanation in das menschliche Blut bei der Inhalations- und Trinkkur.) H. Mache and E. Suess.
142 Alkali in Treatment of Albuminuria. W. Weiland.
143 *Sexual Neurasthenia. (Eine besondere sexuell Neurasthenie in reiferem Alter.) C. Hudovering.
144 Poisoning from "Hell-Oil" Nuts. (2 Fälle von schwerer Vergiftung durch Curcasnüsse.) A. Lippmann.
145 Radish Juice in Treatment of Gall-Stones. (Behandlung der Cholelithiasis mit Rettigsaft.) Grumme.
146 Technic for Cosmetic Operations and Treatment. (Die Technick der kosmetischen Encheiresen.) J. F. Kapp.

139. **Tuberculosis in Children.**—Hamburger insists that tuberculosis is an infectious process which accompanies civilized beings from childhood to the grave. Its resemblance to syphilis is striking; both have the primary lesion with enlargement of the glands in the vicinity, immunity to reinfection and, in striking contrast to this, the tendency to relapses. The resemblance is still more striking when we recall that in tuberculosis as well as in syphilis there are three well marked stages, a primary, a secondary and a tertiary stage. The tuberculous process in children is characterized by relative benignity. A large proportion of tuberculous lesions in children are recurrences, just as in syphilis; they show that the individual is incapable of rendering his bacilli innocuous. Measles displays a remarkable power in enhancing the predisposition to recurrence. This has been observed from the earliest days, attention having frequently been called to the epidemics of tuberculosis which have followed close on epidemics of measles. Every physician knows in his own experience of latent tuberculosis in some child which flared up into an acute form under the influence of trauma. In examining a child the possibility of tuberculosis should always be borne in mind. It is extremely frequent in children but it rarely occurs in the form of pulmonary tuberculosis; the latter may be regarded as the tertiary form of tuberculosis. It develops only in those who have harbored the tubercle bacilli for a long time, similarly to gumma in syphilis. The prognosis depends on whether the affection is primary or a recurrence, but above all on the age of the child at the time of the first infection. Fully 80 per cent. die of children infected before they are a year old, while only from 10 to 20 per cent. die of those in whom infection did not occur until the second year. The mortality continues to decline, dropping to 3 or 4 per cent. between 3 and 6 years, and after 6, to less than 1 per cent.; these figures refer to primary infection and not to recurrences. He advocates complete separation of young infants from the tuberculous; spit-cups will never alone ward off tuberculosis. Everything should also be avoided that would enhance the predisposition, especially measles and whooping-cough. When a child 2 or 3 years old develops phlyctenula, it must be protected with special care against measles and whooping-cough. In enhancing the resisting power to tuberculosis, ample nourishment is important but overfeeding is liable to do direct harm, the child frequently loses all appetite. In this case it often proves effectual to stop all food for a day or so; it is surprising to see how the appetite returns when all food is denied a child. In all cases of tuberculosis in children, treatment by general measures is the main thing; orthopedic measures are not enough alone. He is convinced that more harm than good has been done with tuberculin treatment of tuberculous children. Tuberculin treatment is still, he declares, in the tentative stage.

143. **Sexual Neurasthenia in Engaged Bachelors in the Forties.**—Hudovernig describes a form of psychoneurosis in men who had settled down into a bachelor existence with considerable business responsibilities but finally were making arrangements to get married and were worried for fear they were not going to be capable of fulfilling their conjugal duties. From worrying, it is merely a step to a neurotic phobia with psychic depression, loss of confidence in all the affairs of life, loss of appetite, palpitations, dizziness, vasomotor excitability, moderate tremor of the hands and exaggerated reflexes. The physical findings were negative except that the hemoglobin percentage was seldom over 70. The cure is soon complete as the physician convinces the patient of the psychic origin of his trouble. The previous history of the patient seems immaterial from the standpoint of the development of this neurosis.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 18, XXXIV, No. 34, pp. 445-452

147 Herpes Zoster as Complication of Bronchitis or Pneumonia. C. Garmagnano.

March 20, No. 35, pp. 453-460

148 Modification of Pancreatic Juice in Epinephrin Glycosuria. (Modificazioni della secrezione esterna pancreatica nelle glucosuria adrenalinica.) V. Paglione.

March 23, No. 35, pp. 461-476

149 Presence and Action of Sugar in the Organism. (Sul contegno e sull' azione degli zuccheri nell' organismo.) P. Albertoni.
150 Osteomyelitis. (Alcune rare forme di osteomielite.) M. Fasano.

March 25, No. 36, pp. 477-484

151 Hemostasis in Resection of Parenchymatous Organs. G. Caponetto.

Policlinico, Rome

March 30, XX, No. 13, pp. 437-472

152 Influence of Radium on Blood-Pressure and Blood-Count. (Influenza del radium sulla formula ematologica e sulla pressione sanguigna.) G. Glacchi.

March, Surgical Section No. 3, pp. 97-144

153 Experimental and Clinical Study of Obstruction of Mesenteric Blood-Vessels. N. Leotta. Commenced in No. 2.
154 Two Cases of Multiple Peripheral Neurofibrosarcomatosis. E. Magni.

Riforma Medica, Naples

March 22, XXIX, No. 12, pp. 369-336

155 Permeability of Intestine Wall for Bacteria and the Protecting Action of the Omentum. A. Poddighe.

March 29, No. 13, pp. 337-364

156 The Adrenals. (Fisiopatologia delle capsule surrenali in rapporto al morbo di Addison ed alle sindromi surrenaliche.) C. Castellino. Commenced in No. 9.

Semana Medica, Buenos Aires

February 27, XX, No. 9, pp. 497-560

157 Technic for Amputation of the Leg. (Amputacion osteoplastica de la pierna. Procedimiento di Bier modificado.) J. Caliguri.
158 Echinococcus Disease of the Lung. (Quistes hidatidicos del pulmon.) J. P. Hemminges.
159 Heat and Life. (El calor y la vida.) D. Carbonel.
160 Tests for Invisible Writing. (Los metodos de Stockis para la revelacion de las escrituras secretas.) A. L. Marzo.
161 Hematuria. (Los hematuricos.) E. Perez-Grande.

March 6, No. 10, pp. 561-620

162 Septic Tanks and Disposal of Sewage in General. (Eliminacion de los residuos cloacales. Su depuracion biologica.) P. J. Pando.
163 Digestive Disturbances as Factor in Skin Diseases. (Subordinacion patogenica de las dermatoses a las dispepsias.) N. Rodriguez.
164 Tuberculosis of the Kidney. (Consideraciones sobre el tratamiento de la tuberculosis del riñon.) D. R. Molla.
165 The Functioning of the Brain. (Actividad cerebral.) D. Carbonel.
166 Abuse of Antiseptics in Treatment of the Eyes. (Sobre el empleo abusivo de ciertos medicamentos en terapeutica ocular.) S. Blanco.
167 Regeneration of the Blood in Anemia. (La regeneracion fisiologica de la sangre en las anemias.) J. C. Fillol.

Miscellany

The Care of Lepers in Hawaii

Until sixty years ago leprosy was unknown in the Hawaiian Islands. According to McCoy of the Public Health Service (*Public Health Reports*, April 18, 1913), the disease was at that time probably introduced by Chinese immigrants. For this reason the natives still call it "the Chinese disease." Its spread must have been rapid because four years later the board of health took measures to isolate the persons who were afflicted. This policy of segregation has been carried on ever since. Contrary to general opinion the lepers are not kept on a barren island far out in the ocean, nor is the colony controlled by guards to prevent escapes. On the contrary, the settlement is placed on a small peninsula about 9 miles square, jutting out from the northern side of the island of Molokai.

Molokai is a beautiful island and its leper settlement comprises only about one-fortieth of its total area. The lepers are satisfied to remain in the settlement and no guards are required. If any one should escape he would be apprehended and returned by the police of the island. The law requires that every case of leprosy be reported to the proper sanitary authorities by whomsoever may happen to have cognizance of it, whether physician or layman. Before the patient is sent to the Molokai settlement he is referred to the isolation hospital in Honolulu where he is given the benefit of at least six months' treatment. At the end of this time if improvement is noted treatment is continued. If there is no improvement he is sent to the settlement. At the discretion of the board of health the patient may be accompanied by a healthy adult, either wife, husband or parent. In many instances there are marriages among the lepers at the settlement.

Although this practice is condemned by some, McCoy is of the opinion that it is much better to allow it than to attempt to segregate the sexes. Whenever children are born of such unions they are at once removed to clean surroundings and cared for by the territory until they become self-supporting. At the settlement each family is provided with a house and some land. Besides this, ample rations, clothing, and medical attendance are furnished free. At present there are about 700 known lepers in the Hawaiian Islands. These are all either at the settlement or at the isolation hospital in Honolulu. It is believed, however, that there are many lepers at large unknown to the authorities. Leprosy is gradually dying out in the islands. This is not due to improved methods of treating it so much as to the fact that the native race, which is chiefly afflicted, is fast diminishing. There are now only about 36,000 native Hawaiians and about 2 per cent. of these have leprosy.

When compared with the results in the handling of other infectious diseases the success achieved with leprosy is not very flattering. This is due to many causes. Perhaps the fact that politics has necessarily entered somewhat into the situation is partly to blame; but the chief factors that interfere with the rapid extermination of leprosy are those which are inseparably bound up with the disease itself. Although it is known to be infectious, we do not know how the infection is carried. Although the period of incubation is not ascertained, we know that it is so long that early diagnosis is practically impossible. Many persons have the disease, probably in an infectious stage, before the signs are obvious which make their apprehension by the authorities possible. These are handicaps which render a quick solution of the problem impossible. Pending the acquisition of further knowledge concerning the natural history of the disease itself, it would seem that periodic examination of every one in the islands is the only way in which all cases can be surely detected during their incipiency.

Propaganda for Reform in Italy.—The question of regulation of the sale of patent medicines and proprietaries has recently been discussed in the Italian parliament, and the *Policlinico* quotes with approval from an article in the Venice lay paper, *Il Veneto*, which has taken an advanced stand in regard to the necessity for checking the fraudulent advertising of proprietaries. The article states that certain senators during the recent discussion called the attention of the government to the danger to the health and injury to the pocket of the public from the use of proprietary medicinal articles without the sanction of medical advice. Physicians have repeatedly protested against the exaggerated claims made for medical or specific specialties advertised directly to the public; but this is the first time that the echo of their protests has been heard in the halls of legislation. It is a sign of progress that the matter has now passed beyond the limits of medical journals and medical congresses; it shows that the government realizes the necessity for protecting the health of the public against the nefarious works of quacks. The presiding officer of the senate stated that he would use all his power to aid a reform which he thought would regulate the production and exploitation of fraudulent medical proprietaries. The article continued to the effect that medical advertising is becoming more and more exaggerated in the Italian press as a whole, promising miraculous cures, etc. This antihygienic and antisociologic commercialism should be attacked both by the medical profession and by the government. Various methods for controlling the sale of proprietaries are suggested and a vigorous effort is advocated to obtain restrictive legislation, while, on the other hand, it urges that every effort should be made to awaken and cultivate the hygienic conscience of the people. The article reviews what has been accomplished in other countries, and France is praised for its energetic action against the Maclaughlin electro-vigor belt company, which was compelled to pay damages of 30,000 francs to the representatives of the national French medical association. The sale of this electro-vigor belt has been forbidden in England, Germany and the United States, but it is still tolerated in Italy, where the proprietor can sell his goods without restriction. In conclusion the United States is lauded as the first to lead the way to protect the public against some of the evils of patent medicines, fraudulent labels, etc.

Indirect Treatment of Gastric Ulcer.—C. Alvarez (*Siglo Medico*, 1912, lix, 717) removed a tumor near the spine of a woman of 40 who had suffered for three years from a severe stomach affection rebellious to all medical measures. The tumor shelled out easily and at once all symptoms on the part of the stomach subsided and have not returned during the nearly fifteen years since. This experience suggested that the stomach trouble had been maintained by irritation from the nerves involved in the tumor, and that the manipulation and division of some of the nerve branches during the operation was responsible for the excellent effect of the operation. Alvarez experimented on the cadaver and on dogs, and here reports eight cases of stomach trouble or actual gastric ulcer, in which he put an end to the gastric disturbances by stretching the sympathetic in the region where he had removed the tumor in the case mentioned above. He exposed the interspaces between the sixth and ninth ribs and opened up the corresponding nerves. He then applied traction to those nerves, pulling on them from the periphery, with care not to injure the pleura, doing this on both sides. The result in the first case was the complete cure of the pain and vomiting from which the woman of 27 had suffered for three years with recurring hematemesis. Her stomach has been apparently entirely normal during the months since. The total acidity in this case before the operation had been 211 (normal 89); free hydrochloric acid 109 (normal 44); total chlorids 591 (normal 321). The findings in the other cases are also given in detail, all the patients showing marked improvement at once and all the gastric symptoms soon disappearing entirely. The gastric trouble seems to be kept up by a reflex, secondary hypersecretion of nervous origin; eliminating this, the reflex exaggeration of the secretion stops and the vicious circle is broken up. It is possible that stretching one nerve alone might answer the purpose, but his success with stretching the three pairs was so fine that he hesitates to modify the technic.

The Control of Temperatures in the Pasteurization of Milk.—In the pasteurization of milk it is desirable that no portion of the apparatus be overheated to such an extent as to scorch the milk. C. H. Kilbourne (*Am. Jour. Pub. Health*, March, 1913), suggests a method by which the temperature may be controlled in the pasteurizing apparatus and maintained at a uniform stage. He says that the usual method of applying heat to the pasteurizer is either to introduce the steam directly into the heating-chamber or to introduce it into the water which flows into the heating-chamber. In either case the chances are very great that some steam will strike the heating-surface before it has become condensed, and it will therefore cause some portions of the heating-surface to become superheated, which will impart a scorched taste to the whole body of milk, although the average temperature of the milk leaving the apparatus may be well below the pasteurizing temperature. It is desirable that the heating-surface with which the milk comes in contact shall never reach a temperature more than 15 degrees F. higher than that to which it is desired that the milk shall leave the apparatus. That temperature is 145 F., which means that the apparatus must not have a temperature higher than 160 F. One method of accomplishing this is to have a separate tank outside of the milk-heater filled with water, which is kept at a temperature of 160 F. by means of a thermostat placed in the pipe. This works all right when the milk is not forced too rapidly through the heater; in the latter case it drops rapidly below the desired 145 degrees after leaving the apparatus. Kilbourne's method of avoiding this is to attach a thermostat to the outlet pipe through which the hot milk leaves the heater, so arranged that it will control the flow of milk into the apparatus.

The Bezoar as a Charm Against Disease.—A charm against disease that may not be so well known as the buckeye or the potato for the prevention of rheumatism, or the madstone for the prevention of hydrophobia or the cure of snake-bite, is the bezoar. This is a mineral concretion which is found in the stomachs of herbivorous and ruminant quadrupeds and which sometimes has hair incorporated with it, when it is often called a hair-ball. As a rule bezoars have as a nucleus some indigestible substance taken into the stomach with the food; this nucleus gradually becomes coated with superphosphate of lime or ammonium or magnesium phosphate, in a similar manner to that by which some foreign substance in the oyster, becoming coated with calcium carbonate, is converted into a pearl. Bezoars which consisted entirely of mineral matter without the coating of hair were esteemed particularly in the Orient for their supposed medicinal virtues. The possession of a bezoar was believed to protect the owner against various diseases, and a bezoar was regarded as especially efficacious as an antidote to poisons, even the bites of venomous reptiles. Sometimes these charms were placed in costly settings and worn about the person, choice specimens commanding high prices, according to their size. A number of gold-mounted specimens have been preserved in the Court Museum at Vienna.—*Scientific American.*

The Throat in Prophylaxis of Tuberculosis.—Dr. Friedrich of Kiel has induced the association of German laryngologists to take steps to emphasize the importance of treatment of the upper respiratory tract and especially the larynx in combating tuberculosis. It is quite generally believed that tuberculosis of the larynx is incurable and that it occurs only in the latest stage of pulmonary tuberculosis when all treatment is hopeless. As a matter of fact, he says, laryngeal tuberculosis is curable in its early stages. It requires special local treatment, and if such treatment is not given promptly pain interferes with proper nourishment and the general health declines rapidly. Tuberculosis of the larynx is particularly infectious because of the frequent coughing and expectoration. Early and frequent examination of the larynx in all cases of pulmonary tuberculosis, and appropriate local treatment in positive cases are therefore very effective measures in limiting the spread of tuberculosis. He published an appeal on the subject in *Tuberculosis*, 1912, xi, 519.

Association News

THE MINNEAPOLIS SESSION

(Continued from page 1459)

Local Committee on Arrangements
(Concluded)

COMMITTEE ON SECTION MEETINGS

J. P. Sedgwick, Chairman. A. E. Johann, Secretary

COMMITTEE ON LADIES' ENTERTAINMENT

Mrs. W. A. Jones, Chm. Mrs. F. F. Wesbrook, Secretary

COMMITTEE ON ST. PAUL ENTERTAINMENT

J. W. Chamberlain, Chairman.

COMMITTEE ON FINANCE FOR ST. PAUL

F. W. Stumm, Chairman. C. E. Smith, Secretary.

VICE-CHAIRMEN OF SECTION COMMITTEES

Practice of Medicine, J. E. Hynes.
Surgery, E. A. Moren.
Obstetrics, Gynecology and Abdominal Surgery, Ivar Sivertsen.
Ophthalmology, J. S. Macnie.
Laryngology, Otology and Rhinology, W. R. Murray.
Diseases of Children, M. Seham.
Pharmacology and Therapeutics, E. D. Brown.
Pathology and Physiology, F. H. Scott.
Stomatology, Jay N. Pike.
Nervous and Mental Diseases, A. S. Hamilton.
Dermatology, H. G. Irvine.
Preventive Medicine and Public Health, F. F. Wesbrook.
Genito-Urinary Diseases, H. A. Cohen.
Hospitals, L. B. Baldwin.
Orthopedic Surgery, E. S. Geist.

MEETING OF NON-AFFILIATED ORGANIZATIONS

The American Academy of Medicine is to meet in Minneapolis June 13-15. The headquarters and meetings will be at the Hotel Leamington. The social session and banquet will be given at the same place on the evening of June 14. The general topic of the meeting will be "The Physical Basis of Crime," and several valuable papers are promised.

In connection with this meeting, the fourth annual conference of Western Medicine in Eastern Lands will be held Sunday afternoon, June 15, at 3 o'clock, in Westminster Church.

The American Association of Teachers of Diseases of Children will meet at the Commercial Club in the Hotel Radisson, Minneapolis, June 16. A morning session will be devoted to the reading of reports. In the afternoon, clinics will be given by local pediatrists, and the evening session will be devoted to the reading of papers. Further information may be obtained from Dr. J. P. Sedgwick, chairman of the Committee on Arrangements, Minneapolis.

The American Association of Anesthetists will convene and will hope to join hands in the meetings with the Section on Physiology and Pathology and the Section on Surgery.

HOTELS AT MINNEAPOLIS

Desirability of Making Reservations at Once

The Subcommittee on Hotels for the Minneapolis session, submits the list of hotels on the opposite page.

Those who are particular about their accommodations should secure reservations at once. They can write direct to the hotels, or to Dr. S. Marx White, 1106 Donaldson Building, Minneapolis, Chairman of the Committee on Hotels, who will be pleased to give any assistance possible. In writing, one should state the scientific section of the Association preferred and as exactly as possible the lodgings desired, that is, the approximate price, whether with or without bath, and who will be in the party.

TRANSPORTATION TO THE MEETING

Rates for Round Trips to Minneapolis—Announcement of the Transportation Committee

The Committee on Transportation and Place of Session suggests that members consult the local ticket-agent in their home town for full information regarding rates, time limits, extensions and stop-over privileges preparatory to purchasing railway tickets for the Minneapolis meeting. The tariff schedules on file at every ticket-office will allow the local agent to quote rates from any point. In addition to this, with the assistance of the agent, a physician can plan for an additional trip either going or coming. Those who intend going to the Yellowstone Park, the Pacific Coast, Alaska or other points should arrange for tickets for the entire trip. These side trips, of course, may be arranged for from Minneapolis; but in most instances a better rate can be obtained if a complete itinerary is submitted to the local agent. The committee announces the following rates for the Minneapolis meeting:

The Transcontinental Association announces a fare via direct route from California common points to Minneapolis and St. Paul, of $75.70. Circuit fare, one way via Shasta route, or S. F. and P. S. S. Co. between San Francisco and Portland, or P. C. S. S. Co. between San Francisco and Seattle, $85.35 from San Francisco; from Los Angeles, $95.35.

From Bellingham, Everett, Spokane, Tacoma and Seattle, Wash., or Portland, Ore., to Minneapolis, $60. Inquiries should be made of your local ticket-agent for definite information concerning the date of sale and time-limit.

The Central Passenger Association advises the committee that summer tourist fares will be in effect at the time of the meeting in Minneapolis. These tickets are all of non-transferable form and will be on sale from June 1 to Sept. 30, 1913, with final return limit to reach original starting point not later than midnight of Oct. 31, 1913.

The Trunk Line Association has authorized the following rate of fare from points in its territory:

One and one-half first-class limited fare to trunk line western termini, plus summer excursion fares tendered therefrom for the round trip. Tickets to be sold to Minneapolis or St. Paul. Dates of sale, June 12, 13 and 14. Final return limit, tickets to be limited to reach original starting point, Oct. 31, 1913. Tickets to be sold going and returning by same route only. No validation of tickets for return passage will be required. Private or sleeping cars occupied by passengers in Minneapolis or St. Paul will be parked at a charge of $10 per car per day.

We are advised that special trains and special cars are being arranged for from various points.

J. RAWSON PENNINGTON, Chairman.

Rival Routes Vying with One Another in Extension of Courtesies to the Profession

The railway lines between Chicago and Minneapolis are giving special attention to the question of transporting members to the meeting, and on some of the roads special trains, reserved for members and their friends, will be run. Railways from other points than Chicago will extend similar facilities to members in the East, South and Southwest.

The President's Special

In honor of Dr. J. A. Witherspoon of Nashville, Tenn., President-Elect of the American Medical Association, a train to be known as the President's Special will be run from Nashville to Minneapolis. Three railways will cooperate in running this train and there will be a day's stop-over in Chicago.

The train will leave Nashville at 7:50 p. m., Sunday, June 15, and will be due in Chicago, via the Louisville and Nashville and Chicago and Eastern Illinois, Monday morning at 9:30. The train will leave over the Chicago, Milwaukee and St. Paul at 6:30 p. m., Monday, and will be due in Minneapolis at 7:45 Tuesday morning. Arrangements may be made to join this train by writing Dr. Perry Bromberg, secretary of the Tennessee State Medical Association, Nashville.

Trains from the Southwest

Texas members have announced, after conference, that they will travel over the Rock Island to Kansas City, the

Hotel, Section Headquarters and Street Address	No. of Rooms	Without Bath		With Bath	
		Single	Double	Single	Double
RADISSON—*General Headquarters*—Seventh St., bet. Nicollet and Hennepin	320	$1.50	$2.50	$2.50 to $5.00	$4.00 to $7.00
WEST—*Practice, Pathology, Dermatology, Hospitals,* and *Nervous*—Fifth St. and Hennepin Av	375	1.50 to 3.00	2.50 to 4.00	2.00 to 4.00	3.50 to 6.00
LEAMINGTON—*Surgery*—1013 Third Av., South	600	1.50	2.50	2.50 to 5.00	5.00 to 7.00
ANDREWS—*Obstetrics, Gynecology and Abdominal Surgery*—Fourth and Hennepin	200	.....	.....	1.50 to 3.00	2.50 to 4.00
DYCKMAN—*Ophthalmology*—81xth St., bet. Nicollet and Hennepin	200	.....	.....	2.00 to 4.00	4.00 to 6.00
PLAZA—*Laryngology, Otology and Rhinology*—1700 Hennepin Av	100	.....	.....	3.00 to 5.00	5.00 to 7.00
MAJESTIC—*Pharmacology and Therapeutics,* and *Diseases of Children*—Seventh and Hennepin	100	1.00 to 2.00	1.50 to 2.50	1.50 to 3.00	2.50 to 4.00
NICOLLET—*Stomatology*—Washington, Hennepin and Nicollet Avs.	150	1.00 to 1.50	2.00 to 2.50	2.00 to 2.50	3.00 to 3.50
ROGERS—*Preventive Medicine and Public Health*—27 Fourth St., South, corner of Nicollet	150	1.00 to 1.50	2.00 to 2.50	2.00 to 3.50	3.00 to 5.00
VENDOME—*Genito-Urinary Diseases*—19 Fourth St., South	200	1.00 to 2.00	2.00 to 3.00	2.50 to 3.00	3.50 to 4.00
ST. PAUL (in St. Paul)—*Orthopedic Surgery*—Fifth and St. Peter Sts.	360	.....	.....	2.50 to 5.00	4.00 to 7.00
OTHER HOTELS IN MINNEAPOLIS					
ALLEN—200 Third St., South, corner of Second Av	65	1.00 to 1.50	2.00 to 2.50	2.00	3.00
CAMFIELD—First Av., South, and Eighth St	50	1.00	1.50	2.00	3.00
CLINTON—Fourth Av., South, and Grant St	65	2.00	3.50		
ELGIN—Hennepin Av. and Eighth St	150	1.00	1.50	1.50 to 2.00	2.00 to 3.00
HAMPSHIRE ARMS—Fourth Av., South, and Ninth St	300	1.00	1.50	2.00	3.00
HASTINGS—Twelfth St. and Hawthorne Av	127	.....	.....	1.50 to 2.00	2.00 to 3.00
MARYLAND—Grant St. and Vine Pl	200	.....	.....	1.50 to 2.50	2.50 to 4.00
NATIONAL—Second Av., South, and Washington	200	1.00 to 1.50	2.00 to 3.00	1.50 to 3.00	3.00 to 5.00
REVERE—316 Second Av., South	100	1.00 to 1.50	2.00 to 2.50	2.00	3.00
ROSSLYN—707 Summit Av	70	.....	.....	1.00 to 1.50	2.50 to 4.00
WILLISTON—500 Tenth St., South, corner of Fifth	50	1.00	1.50	2.00	2.50
ST. PAUL HOTELS					
ABERDEEN—Dayton and Virginia	200	.....	.....	1.50 to 3.00	3.00 to 5.00
FREDERICK—Fifth and Cedar Sts	100	1.00	2.00	1.50 to 3.00	2.50 to 4.00
RYAN—Robert St.	300	1.00 to 1.50	2.50 to 4.00	2.00 to 4.00	3.00 to 6.00
WILLARD—Tenth and St. Peter Sts	200	.75	1.25	2.00 to 4.00	3.00 to 6.00

Burlington from Kansas City to Council Bluffs, and then by the Northwestern.

The Missouri Valley and Southwest Special will run over the Chicago Great Western from Kansas City, leaving on the afternoon of Sunday, June 15, due in Minneapolis at 8:05 a. m. Monday, in order to give delegates time to get located in Minneapolis and attend the sessions of the House of Delegates and other special meetings which are to be held prior to the opening meeting of the Association on Tuesday. Reservations on this train, which will carry a number of delegations, may be made by addressing Dr. Charles Wood Fassett, St. Joseph, Mo.

The Burlington's American Medical Special

The Burlington has arranged for an American Medical Special train, which will leave Chicago from the Union Station at 8:30 p. m., Monday, June 16, and will arrive in Minneapolis the following morning at 9 o'clock. This handsome train will carry the most modern equipment, including one of those thoroughly comfortable lounge cars, containing library, writing-desks, club-room for men, observation-room for women and a veranda sun-parlor entirely enclosed in glass.

The Burlington Route between Chicago and Minneapolis has been called for twenty years or more the Mississippi river scenic line. For almost the entire distance from Savanna, Ill., north, the rails are in sight of the majestic "Father of Waters," with a broad island-dotted expanse on the one hand and bluffs on the other. From Prairie du Chien to Lake Pepin, every reach and turn in the river presents to the eye magnificent scenes of grandeur and beauty. These scenes and the charm of Lake Pepin, along whose shores the American Medical Special passes for 30 miles, are alone enough to make the Burlington Route the choice of a great many. In addition, every mile is replete with historic and legendary interest.

A beautifully illustrated booklet, prepared exclusively for the American Medical Association, has been issued by the Burlington Railroad. This booklet gives information as to the route, rates, side-trips and hotels and a copy will be mailed on application. Reservations and other information may be obtained of A. J. Puhl, General Agent, Passenger Department, Burlington Route, 141 South Clark Street, Chicago.

Chicago Medical Society Special on the Chicago, Milwaukee and St. Paul

The Chicago Medical Society Special will leave the Union Station, Chicago, at 9:30 p. m., Monday, June 16, and will run by way of the Chicago, Milwaukee and St. Paul Railway. There is no return special. The train will consist of electrically lighted standard and compartment sleeping-cars, buffet-observation car and dining-car in which breakfast will be served while traversing the west bank of the beautiful Mississippi River from LaCrosse to Minneapolis, a distance of 140 miles.

The Chicago, Milwaukee and St. Paul Railway announces that it owns and operates all of its equipment, including sleeping-cars with berths that are "longer, higher and wider," and that nothing will be left undone to make the journey to Minneapolis a thoroughly enjoyable one. Sleeping-car reservations should be made as early as possible of C. N. Souther, General Agent Passenger Department, Chicago, Milwaukee and St. Paul Railway, 315 Marquette Building, Chicago, who will assign the space and confirm the reservation by letter.

Stop-Over Privileges at Rochester, Minn., on the Chicago Great Western

The Chicago Great Western announces that it is the only road by which one may pass through Rochester, Minn., the home of St. Mary's Hospital and the Mayos, without paying additional fare. Tickets between Chicago, Kansas City, St. Joseph, Des Moines and St. Paul and Minneapolis are good either direct or via Rochester at the passenger's option. Sleeping-cars are operated daily between Chicago and Rochester, as well as by the direct line between Chicago and Minneapolis. Convention tickets permit stop-over.

Four years ago a consultation was held over a badly run-down patient. Some of the foremost doctors in the country were called in, chief among whom was the late J. Pierpont Morgan. The consultation was held in New York, the patient being the Chicago Great Western Railway.

The normal function of the Great Western was the hauling of passengers and freight. As it was needed in constant service no "rest cure" was feasible. The railroad doctors therefore prescribed an abundant money chest to be drawn on freely in procuring new rolling-stock, bridges, terminals, automatic safety signals, new track and ballast—in fine, to build practically a new body. It is doubtful if ever there was a case on record in which the diagnosis was more accurate and certainly there has never been recorded a case in which the recovery was more rapid and complete.

To-day the Chicago Great Western is looked on as a strong line and a perfect artery for travel.

The Northwestern Line

The trains of the Northwestern leave from the new passenger terminal, which is one of the finest monuments ever erected to the commercial life and spirit of the West. The rails are heavy and the track straight, so that an excellent night's rest can be taken before the passenger awakes in Wisconsin. The morning ride is through a charming open country, leading to St. Paul, which is built on the bank of the Mississippi River, on a series of imposing hills, almost directly opposite Minneapolis. In addition to its commercial activities it can boast of a beautiful location, delightful climate, numerous points of historical interest and an unending list of summer attractions. The Indian Mounds, the Fish Hatchery, Fort Snelling, Como Park, Minnehaha Falls and the State Capitol Building are all well within the city limits, and Lake Minnetonka and White Bear Lake are close at hand.

The Northwestern Line is splendidly equipped and handles a heavy traffic expeditiously.

It will be seen from the foregoing that railway facilities to Minneapolis are of the first order, and each of these railways will undoubtedly be used by members attending the annual meeting. The fare from Chicago to Minneapolis and return will be $16, double lower berth $2, section (double lower and upper) $3.60, compartment $5 and drawing-room $7.

OUTSIDE EXCURSIONS

Many physicians and their families, attending the Minneapolis meeting, will wish to extend their annual holiday by way of excursions to the great sight-seeing regions of the Northwest.

A special committee on arrangements, appointed for this purpose, has planned several notable trips which are offered, at summer tourists' rates, to their guests.

On previous pages of this issue are some views of the scenes on these trips.

The Yellowstone National Park

Parties will go by two special trains on a twelve days' excursion to the Yellowstone National Park, June 20 and 21. The Northern Pacific Railway will furnish these trains, and it promises something in the way of dining-car service that cannot be equaled anywhere in the country. It is an unusually interesting fact that the Northern Pacific owns and manages its own poultry and dairy farms, maintains its own bake-shops, and prepares all its meats in its own shops. The line has become famous as the "Big Baked Potato Route."

Dr. H. H. Kimball of Minneapolis, Chairman of the Excursion Committee, will make his third tour of the park with one of the special parties, and his committee is making every arrangement for the comfort and pleasure of the party. Both the Northern Pacific Railway and the Yellowstone Park Hotel Company will have many special features for this entertainment. This is not a trip that entails any hardships. The entire tour of the park is made in large comfortable Concord

coaches, and there is no horseback riding to do unless one is looking for that sort of travel. The highest altitude reached is a little over eight thousand feet, so that there is no danger in advising the most delicate persons to make the trip.

The Chicago party will occupy two special sleepers of their own. Reservations from other points scattered from Missouri River points to the Atlantic coast have now taken about all of two other cars, and judging from inquiries that are coming in to the Excursion Committee, all of the space on the two special trains already arranged for, will be taken by the date of the opening of the meeting.

The Rainy Lake Country

Another possible trip to northern Minnesota extends to the beautiful Rainy Lake country. Minneapolis physicians who own islands at Rainy Lake, which lies on the international boundary line, will entertain friends at their summer home.

Glacier National Park

Still another excursion for rest and recreation will be made to the wonderful Glacier National Park. This "personally conducted tour" through Glacier National Park will leave Minneapolis at 11:15 p. m., Friday, June 20, consuming eleven days for the round trip, eight and a quarter of which will be spent in viewing the wonders of Glacier National Park, while the balance of the time will be occupied *en route* through the famous farming and grazing regions of Minnesota, North Dakota and Montana.

Arriving at Glacier Park Station (eastern entrance) at 7:33 a. m. the second morning, breakfast will be taken at the new Glacier Park Hotel, erected at an expense of $100,000, and automobiles will be taken at 10 a. m. for St. Mary's Camp, 32 miles north. The trip from here will be via stage, launch and saddle horses to the various camps in the interior of the park. These camps, of which there are eight, are built on the Swiss chalet plan and the sites are selected on account of their convenience and beauty.

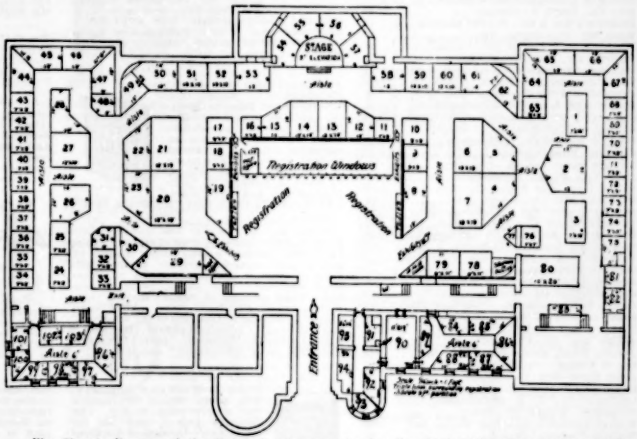


Fig. 21.—A diagram of the University Armory, showing the Registration Department and the Commercial Exhibit.

In addition to the main tour, another has been arranged to accommodate those guests who do not desire to use saddle-horses.

While the Great Northern Railway dining-car service arranged is à la carte, the cost of the trips, on the all-expense plan, will be per capita $105, on the basis of $1 per meal on the diner. Members going to the Pacific Coast or to Alaska can stop over at Glacier Park Station and make this trip at a cost of $48, which includes all hotel and transportation expenses in the park.

A special illustrated itinerary has been printed and will be sent anyone on application to Dr. H. H. Kimball, chairman Excursion Committee. Reservations should be made as early as possible.

For those who desire to extend the trips from the Yellowstone National Park or the Glacier National Park to farther points, special opportunities will be given for excursions to the Colorado Rockies, to the Canadian Rockies, to California and the Puget Sound country, and on to Alaska for a twelve days' cruise by way of the Inland Passage, including visits to some interesting Indian and Eskimo villages and to some of the finest of the Alaskan glaciers.

Alaska—Along the Shores and Beyond

From Seattle there are two lines of excursion steamers. Stops *en route* to Skaguay are made at all of the interesting ports, Prince Rupert, Ketchikan, Metlakahtla, Wrangell, Juneau, the great Treadwell gold mine, Sitka, and the glaciers, including Taku, now the most beautiful glacier along the shores of Alaska. The steamers contain two-berth rooms, and serve excellent meals. All of the steamers except the *Spokane* permit their passengers to stop off at Skaguay.

To form an idea of the inland voyage to Skaguay, one should imagine sailing up a river from a half to six miles in width for a thousand miles. The shores are lined with towering snow-capped mountains, verdure-clad below their summits down to the water's edge, and down their sides innumerable cascades rush tumultuously seaward. Countless islands are scattered throughout the course; here and there are glittering mammoth glaciers, and interesting Indian villages with their quaint totem poles. Yet as wonderful as is this voyage it is but a prelude to a trip of still greater scenic grandeur and interest from Skaguay to White Horse and Atlin, or down the great Yukon River to Dawson. Skaguay, the end of the voyage north, is the gateway to the fascinating interior, a land of flowers and sunshine, of delightful summers and indescribable grandeur—the Land of the Midnight Sun. An interesting trip is from Skaguay by rail via the White Pass and Yukon Route through the mountains to White Horse on the Yukon River, 110 miles from Skaguay. Nowhere can there be seen more awe-inspiring scenery than along this pioneer railway of Alaska. As one sits in comfort in the cars one can look down hundreds of feet below and see the old trail over which the gold-seekers in '97 and '98 were wearily toiling with packs on their backs to reach the summit of White Pass and then Lake Bennett.

On this trip one travels over the ground made memorable by that mad rush to the Klondike. There is Dead Horse Gulch, the once dreaded White Pass, Log Cabin, Miles Canyon, White Horse Rapids, and many other historic places.

Returning from White Horse the steamer awaits the passenger at Caribou (68 miles from Skaguay) that will carry him a distance of 80 miles through a chain of wondrously beautiful mountain-girt lakes to Atlan, described by a famous traveler as "the beauty spot of the world." At the head of Lake Atlin is the great Llewellyn Glacier, covering an area of 60 by 100 miles, said to be the largest glacier in the world outside of the polar regions.

THE COMMERCIAL EXHIBIT

Books, Instruments, Surgical Appliances, Foods, Drugs, Furniture, Etc., to be Shown at Minneapolis

It is the aim to make the Commercial Exhibit each year of educational value to physicians rather than a mere trade show. The articles to be displayed this year have been carefully selected so as to carry out this conception of what the exhibit should be. It is of importance that the physician should keep posted on the newer medicinal, biologic and therapeutic products and the newer instruments, books, appliances and methods. The annual exhibit at the session of the American Medical Association affords the busy man an opportunity to accomplish this with the least expenditure of time. Enterprising manufacturers and publishers keep abreast of the new discoveries in medicine and surgery, to the advantage of the physician; and it is to the mutual advantage of the physician and the exhibitor that attention should be given to the displays at the annual meeting.

Following we give a list of the exhibitors and then a series of brief notices concerning those firms from whom we have been able to secure a statement for the purpose.

On the preceding page is a diagram showing the location of spaces in the Exhibit Hall.

Exhibitors

	Space
Allison Co., W. D.—Indianapolis	52
Ambulatory Pneu. Spl. Mfg. Co.—Chicago	76
Anatomik Footwear Co.—New York City	3
Apollinaris Agency Co.—New York City	34
Appleton & Co., D.—New York City	79
Arlington Chemical Co.—Yonkers, N. Y.	57
Bass Islands Vineyards Co.—Sandusky, Ohio	99
Bausch & Lomb Opt. Co.—Rochester, N. Y.	37-38
Betz Co., Frank S.—Chicago	21-22
Blakiston's Son & Co., P.—Philadelphia	78
Bolen Mfg. Co.—Omaha, Neb.	82
Borcherdt Malt Extract Co.—Chicago	88
Brady & Co., Geo. W.—Chicago	92
Burroughs Wellcome & Co.—New York City	14
Buzzell-Flanders Co.—Boston	103
Campbell Electric Co.—Lynn, Mass.	56
Carnes Artif. Limb Co.—Kansas City, Mo.	59
Castle Co., Wilmot—Rochester, N. Y.	51
Chicago Medical Book Co.—Chicago	19
Clark & Roberts Co.—Indianapolis	47
Cleveland Press.—Chicago	77
Comfort Spring Cot Co.—Chicago	84
Davis Co. F. A.—Philadelphia	11
Deimel Linen Mesh System Co.—New York	13
De Vilbiss Mfg. Co.—Toledo, Ohio	69
Der Kurdirector Bad Nauheim—Germany	81
DeZeng-Standard Co., The.—Camden, N. J.	62
Draeger Oxy. Apparatus Co.—Pittsburgh	89
Electro-Surg. Inst. Co.—Rochester, N. Y.	60
Fairchild Bros. & Foster.—New York City	58
Forbes Dry Plate Co.—Rochester, N. Y.	40
Funk & Wagnalls Co.—New York City	96
Geneva Optical Co.—Chicago	98
Greeley Laboratories, Inc.—New York City	97
Hardy & Co., F. A.—Chicago	27-28
Horlick's Malt. Milk Co.—Racine, Wis.	49-50
Jaeckh Mfg. Co.—Cincinnati	33
Johnson & Co., Mead.—Jersey City, N. J.	44
Lea & Febiger.—Philadelphia	20
Leitz, Ernst—New York City	12
Life Saving Devices Co.—Chicago	86-87
Lippincott Co., J. B.—Philadelphia	8
Macalaster, Wiggin Co.—Boston	48
Medical Protective Co.—Fort Wayne, Ind.	83
Mellin's Food Co.—Boston	26
Meyer Co., Wm.—Chicago	73-74-75
Merrowitz, Inc., E. B.—New York City	61
Miller Rubber Co., The.—Akron, Ohio	35-36
Minneapolis Bedding Co.—Minneapolis	67
Mosby Medical Book & Pub. Co.—St. Louis	25
Mueller & Co., V.—Chicago	29-30
Mulford Co., H. K.—Philadelphia	45-46
Myers-Dillon Drug Co.—Omaha, Neb.	66
National Pathological Lab.—Chicago	30
Noyes Bros. & Cutler.—St. Paul, Minn.	90-94
Pulvola Chemical Co.—Jersey City, N. J.	70
Rebman Company.—New York City	68
Roessler & Hasslacher Chem. Co.—N. Y. C.	91-95
Saunders Co., W. B.—Philadelphia	4-7
Scanlan-Morris Co.—Madison, Wis.	41-42-43
Scheidel-Western X-Ray Coil Co.—Chicago	2
Searle & Co., G. D.—Chicago	31
Sischo & Beard.—St. Paul, Minn.	32
Smith, Kline & French Co.—Philadelphia	24
South. Asep. Cotton Co.—Chattanooga	100-101
Spirella Co., Inc., The.—Meadville, Pa.	17-18
Squibb & Sons, E. R.—New York City	80
Taylor Instrument Co.—Rochester, N. Y.	5-6
Teter Mfg. Co.—Cleveland, Ohio	71
Victor Electric Co.—Chicago	1, 63, 64-65
Wampole & Co., H. K.—Philadelphia	53
Wappler Electric Mfg. Co.—New York City	9-10
Waterman Waterbury Co., The.—Minneapolis	72
Welch Grape Juice Co.—Westfield, N. Y.	15-16
Wilson Co., The H. W.—Minneapolis	54
Wilson & Wilson.—Boston	85
Winkley Artif. Limb Co.—Minneapolis	54-55
Wood & Co., Wm.—New York City	23
Year Book Publishers.—Chicago	39

Publishers and Books

D. APPLETON & COMPANY, New York. Space 79. For over fifty years D. Appleton & Company have been publishers of standard medical books. It has been their constant aim to give to the profession only works of individuality, distinction and absolute reliability. Their list has grown slowly; additions have been made with care and discrimination. The APPLETON name has come to be a guarantee of scientific presentation, sound judgment and ripe experience.

P. BLAKISTON'S SON & CO., Philadelphia. Space 78. "Portraits of Famous Medical Authors" will be distributed free at the exhibit. There will also be shown an extensive line of advanced medical books. A purchaser of Blakiston's books writes, "I have a number of your publications and want more. I have come to think that "B" means Best."

F. A. DAVIS COMPANY, Philadelphia. Space 11. Will exhibit among other books of unique and unusual interest several volumes of Sajous' new "Cyclopedia of Practical Medicine," thin paper, revised; new and revised editions of Ball's "Modern Ophthalmology," Phillips' "Ear, Nose and Throat," Bassler's "Diseases of the Stomach" and Morton's "Genito-Urinary Diseases." Also Lorand's "Rational Diet," Pettey's "Narcotic Drug Addictions," etc., etc.

FUNK & WAGNALLS COMPANY, New York. Space 96. Besides the widely read weekly, *The Literary Digest*, and the famous NEW "Standard Dictionary," many valuable new medical books, including Herman's "Diseases of Women," Choyce's "Surgery," Berkeley and Bonney's "Gynecology," Bishop's "Blood Pressure," Hollander's "First Signs of Insanity," are published by this long-established house.

LEA AND FEBIGER, Philadelphia and New York. Space 20. Especially valuable is Lea & Febiger's library of treatment, comprising White & Jelliffe's "Modern Treatment of Nervous and Mental Diseases," Hare's "Modern Treatment" (general), and Cheyne & Burghard's "Surgical Treatment." Also Koplik on "Children," Török & Grout's "Surgery of the Eye," Starr on "Nervous Diseases," Weeks on the "Eye," Stimson on "Fractures and Dislocations," and Hertzler on "Tumors."

YEAR BOOK PUBLISHERS, Chicago. Space 39. This booth will be devoted to the "Practical Medicine Series," the standard authority on the world's progress in Medicine and Surgery. Volumes for 1913, as well as for previous years, will be on exhibition. The series comprises ten volumes and presents, in complete and permanent record, the latest development in every department of Medicine and Surgery.

J. B. LIPPINCOTT COMPANY, Philadelphia. Space 8. This exhibit will contain a number of new and authoritative works on special subjects which will interest all physicians. Among them are Skillern's "Accessory Sinuses of the Nose," Kerrison's "Diseases of the Ear," Nonne's "Syphilis and the Nervous System," etc., etc.

The C. V. MOSBY COMPANY, St. Louis. Space 25. Will show the new and complete edition of the Golden Rule Series, five volumes; also a number of new monographs, such as Pottenger's "Muscle Spasm and Degeneration," Pottenger's "Tuberculin," Warfield's "Arteriosclerosis," Freeman's "Skin Grafting," Sophian's "Epidemic Cerebro-spinal Meningitis," Schorer's "Vaccine and Serum Therapy," and Portner-Davis' "Diagnosis and Therapy of Genito-Urinary Diseases." Also advance illustrations and prospectuses of Loeb's "Operative Surgery of the Ear, Nose and Throat."

REBMAN COMPANY, New York. Space 68. In addition to well-known high quality atlases, a special display will be made of Adam's "Ophthalmoscopic Diagnosis" and Zinsser's "Diseases of the Mouth," both new; new monographs, such as "Ikonograms" by Gardner, "Sterility" by Hübner and Wegele's work on "Therapeutics of the Gastro-Intestinal Tract," and splendid textbooks, as "Guide to Midwifery," by Berry Hart, and "A Course in Normal Histology," by Rudolf Krause.

CLEVELAND PRESS, Chicago. Space 77. At this space especial attention will be given to the new *American Encyclopedia and Dictionary of Ophthalmology*, edited by Casey A. Wood, M.D., C.M., D.C.L., and a large staff of earnest co-workers. Every practicing ophthalmologist should call at this booth.

W. B. SAUNDERS COMPANY, Philadelphia. Spaces 4 and 7. Some of the new books and new editions in this exhibit of particular interest to physicians are these: The New Keen's "Surgery," DeLee's "Obstetrics," Cabot's "Differential Diagnosis," Murphy's "Surgical Clinics," Musser-Kelly's "Practical Treatment," Hornsby and Schmidt's "Modern Hospital," Kemp on the "Stomach, Intestines and Pancreas," Mayo's "Clinic Papers for 1912," Faught on "Blood-Pressure," Brill's "Psychanalysis," Fowler's "Operating-Room and the Patient," Grulee's "Infant-Feeding," Eyre's "Bacteriologic Technic" and Bohn and Painter's "Massage." There are also to be exhibited advance sheets and illustrations of other new editions.

WILLIAM WOOD AND COMPANY, New York. Space 23. New and up-to-date medical books, notable among which may be mentioned: "Reference Handbook of the Medical Sciences," Cunningham's "Manual of Practical Anatomy," Schmieden's "Operative Surgery," Chetwood's "Urology," Stedman's "Medical Dictionary," Kraepelin's "Psychiatry," Cabot's "Physical Diagnosis," Hutchison & Collier's "Index of Treatment," Savill's "Clinical Medicine," Castellani and Chalmers' "Manual of Tropical Medicine."

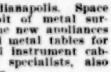
Apparatus, Instruments and Furniture

W. D. ALLISON CO., Indianapolis. Space 52. Attractive, practical and time-saving office devices will be shown at this space. Automatic tables of the highest type; ingenuously designed medicine cabinets; examining and treatment chairs; stools; stands; waste receptacles; reception-room furniture and everything incident to the complete modern office. Representative styles will be on exhibit and are commended to careful consideration.

RAFESCH & LOMB OPTICAL CO, Rochester, N. Y. Spaces 37 and 38. New models in microscopes, microtomes, centrifuges and other laboratory apparatus and supplies for physicians will be displayed by this firm. The instruments shown will form an instructive demonstration of the most recent improvements in diagnostic apparatus which advances in laboratory examination have made necessary.

FRANK S. BETZ CO., Chicago. Spaces 21 and 22. This exhibit will consist of an unusually large display of surgical instruments, batteries, operating-tables, lamps, coils, sterilizers, high-frequency outfits and complete medical, surgical and hospital equipment.

CLARK & ROBERTS CO., Indianapolis. Space 47. An interesting exhibit of metal surgical furniture. Among the new appliances to be shown will be found metal tables for physicians' office use, steel instrument cabinets for physicians and specialists, also specialists' complete outfits.



COMFORT SPRING COT COMPANY, Chicago. Space 84. This invention is intended to solve most of the difficulties of outdoor sleeping, temporary and permanent accommodations for berths and the transportation of invalids. The main features to be demonstrated are the unusual comfort afforded the patient, due to the four springs by which the cot part is suspended and its sanitary convenience, the canvas part being readily removable for purposes of cleaning.

DEVILBISS MANUFACTURING CO., Toledo, Ohio. Space 69. A display will be made of their full line of appliances. A special demonstration will be made of the DeVilbiss Prescription Medicalizer, No. 16.

DEZENG-STANDARD CO., Camden, N. J. Space 62. In addition to a full line of electrically lighted diagnostic instruments for eye, ear, nose and throat work, there will be on exhibition a brand new instrument for doing refraction and muscle work; also muscle exercise. Among the several new things of particular merit on display will be the new electric perimeter and the new electric ophthalmoscope with perfect transluent color test. The new DeZeng Prism Ophthalmoscope will be displayed for the first time at this meeting.

GENEVA OPTICAL COMPANY, Minneapolis. Space 98. New styles in eyeglasses, spectacles and instruments, especially the Elastik Eyeglass and the Geneva ophthalmoscope and retinoscope, ophthalmometers, phoro-optometers, etc. This company specializes largely in specially ground lenses and prescription filling for oculists.

P. A. HARDY & COMPANY, Chicago. Spaces 27 and 28. Newest and latest designs of eye, ear, nose and throat instruments will be exhibited. Also a complete line of ophthalmological instruments and apparatus.

THE JAECKH MANUFACTURING CO., Cincinnati. Space 33. Complete compressed air and vacuum apparatus for all medical and dental purposes will be demonstrated. These outfits occupy small space, are easy to operate and by means of special valve equipment the pressure can be regulated to any desired force.

ERNST LEITZ, New York City. Space 12. In addition to microscopes, microscopic accessories and microtomes as used in the medical profession, the physician will have opportunity to see numerous other devices as used in educational work, but at the same time of interest to the profession. Such instruments will include microscopes for research, photomicrographic apparatus, universal projection apparatus, drawing apparatus, etc.

LIFE SAVING DEVICES CO., Chicago. Spaces 86-87. The Lungmotor, a device for inducing artificial respiration mechanically, will be ingeniously demonstrated on a wax figure with rubber lungs, and electric illumination. This will show the practical processes of the induction of inspiration and expiration by this ingenious but simple machine. Especially useful for asphyxia by gases or fumes, asphyxia neonatorum, apparent drowning, stranguliation, etc.

E. B. MEYROWITZ, INC., New York. Space 61. Will show their standard model ophthalmometer, a new trial frame, the Schlötz tonometer, Zeiss binocular loupe, the Hertel exophthalmometer, improved electric ophthalmoscope with independent pocket battery and rheostat, a full line of scleral trephines, a "shockless" socket rheostat and a number of novelties in surgical instruments.

V. MUELLER & CO., Chicago. Spaces 29 and 30. As in former years, this firm will display a line of surgical instruments and apparatus, but a more complete exhibit will be made than in the past. All of the latest patterns of instruments, both of American and European make, will be shown. Surgical instruments for the eye, ear, nose and throat specialist, gynecologist, genito-urinary specialist and general surgeon; also specialties for the radiographer will be exhibited.

THE ROESSLER & HASSLACHER CHEMICAL COMPANY, New York, Chicago, etc. Spaces 91 and 95. The latest oxone-oxygen generator — Autogenor — automatically producing its own pressure up to 50 pounds, under perfect control of the operator, and adjustable for any purpose, will be shown. Used for vapor and spray medication, for insufflations, injections, for ordinary inhalations and for anesthesia, the machine makes oxygen therapy a practicable feature in the hands of the practitioner, the nose and throat specialist and the surgeon.

SCANLAN-MORRIS COMPANY, Madison, Wis. Spaces 41, 42 and 43. Hospital furniture, sterilizing apparatus and aseptic office furnishings. Among the new articles to be shown by this firm are the Minnesota design B3 operating-table; 1914 pattern high-pressure dressing sterilizer, and a complete line of aseptic office furniture suitable for the specialist, physician and for the surgeon.

TAYLOR INSTRUMENT COMPANIES, Rochester, N. Y. Spaces 5 and 6. The Dr. Rogers' Tycos Sphygmomanometer, in both the pocket and the new office patterns, will be demonstrated. The large dial (8-inch diameter) of the latter, graduated to 300 mm., affords an open reading which can be easily read 12 to 15 feet distant. Tycos fever thermometers, urinary analysis glassware and other instruments of medical and surgical interest will be exhibited.

WILMOT CASTLE CO., Rochester, N. Y. Space 51. Sterilizing Apparatus for hospitals, laboratories and physicians' offices, incorporating the latest features in design and construction will be exhibited by this firm. The apparatus will demonstrate the possibility of installing in a limited space a service that renders efficient and adequate sterilization for any particular office or institution.

Apparatus—Electric

GEORGE W. BRADY & CO., Chicago. Space 92. There will be exhibited some of the work done by various x-ray operators who are using the new Paragon X-Ray Plates. These plates are said to have met with great success since placed on the market, owing to their very fine quality and great speed. Mr. Brady will be pleased to meet all using x-ray.

FORBES DRY PLATE CO., Rochester, N. Y. Space 40. An exhibition of Forbes x-ray plates. During the past year these plates have been introduced on the basis of true quality alone into the largest hospitals and used by many of the leading x-ray workers in the United States. Physicians who attended the previous meeting will be interested to observe the progress which has been made by this firm during the past year.

MACALASTER - WIGGIN CO., Boston. Space 48. An exhibit of x-ray tubes and various accessories. Particular attention will be called to the penetrator type of tube for heavy work. With this tube much better definition and penetration are obtained with the same amount of current than with any other tube. Tungsten target tubes are giving splendid satisfaction, and those to be exhibited at this booth will be well worth investigating.

THE WM. MEYER CO., Chicago. Spaces 73 to 75. Will show an entirely new line of INTERRUPTERLESS x-ray equipments, as well as other electrical apparatus, and will demonstrate their absolute method of obtaining radiographs. The new high speed "AGFA" X-RAY PLATES will be shown and also INTENSIFYING SCREENS of an entirely new type.

VICTOR ELECTRIC COMPANY, Chicago. Spaces 1, 63, 64, 65. Aside from their standard line of electromedical and x-ray apparatus, a number of recent additions will be on exhibition, among which might be mentioned: Victor Interrupterless X-Ray Transformer; combination fluoroscopic, stereoscopic and radiographic tube stand; combination stereoscopic and radiographic table; new type of therapeutic lamp; a new line of electric sterilizers; Victor Mullistadt; 1913 model of the Multiplex Sinusoidal outfit; and several other appliances.

SCHEIBEL-WESTERN X-RAY COIL COMPANY, Chicago. Space 2. Will demonstrate a complete x-ray equipment from the 12-kilowatt transformer to the smallest portable coil. A special attraction will be the fluoroscopic outfit in actual operation, as there is sure to be much interest for this special work.

Foods and Milk Preparations

BASS ISLANDS' VINEYARDS COMPANY, Sandusky, Ohio. Space 99. Physicians and nurses are invited to call at our exhibit and receive a sample of our absolutely pure grape juices. The grapes from which our grape juice is expressed are from the famous vineyards on the Lake Erie Islands, justly famed for producing the best grapes grown in the world.

HORLICK'S MALTED MILK COMPANY, Racine, Wis. Spaces 49 and 50. Will exhibit and demonstrate the original genuine Horlick's Malted Milk, the record of which, as a nutrient, for almost thirty years, is sufficient testimony of its physiologic worth and excellence as a food product. We will also exhibit Horlick's Malted Milk Lunch Tablets, plain and with cocoa flavor. Horlick's Malted Milk Ice Cream will be served at certain hours during the convention.

MEAD JOHNSON & COMPANY, Jersey City, N. J. Space 44. An exhibit of their Dextri-Maltose (pure maltose and dextrin in about equal parts) will be made. It is non-proprietary and is a practical duplicate of the malt-sugar and dextrin preparations made in Germany, where they are largely used by pediatrists, especially those who employ the Finkelstein method of infant feeding.

MELLIN'S FOOD COMPANY, Boston. Space 26. A special effort will be made to furnish physicians with complete information regarding the materials that enter into the manufacture of Mellin's Food, the care used in the making, uniformity of composition, analysis of the product itself and when ready for actual use. Some new work is promised, having special reference to the usefulness of maltose and dextrin, as well as the early history of the chemistry of carbohydrates.

SMITH, KLINE & FRENCH CO., Philadelphia. Space 24. Will exhibit tubes of milk and milk modified with Eskay's Food acted on by artificial gastric juice, to show the effect their cereal modifier has on the curd, rendering the milk more digestible. They will also exhibit jars containing the ingredients out of which their product is manufactured; that is, barley, wheat and oats, sugar of milk and eggs.

ESKAYS
Albumenized
FOOD

Pharmaceuticals and Biologic Products

ARLINGTON CHEMICAL CO., Yonkers, N. Y. Space 57. As in previous years, the makers of liquid peptonoids and hemabololds, preparations which are well and favorably known to physicians, will be represented in the exhibit hall, where, in charge of courteous and competent representatives, these preparations will be displayed together with other features which cannot fail to prove of interest to all who make it a point to visit the exhibit.

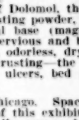
BORCHERDT MALT EXTRACT CO., Chicago. Space 88. Mr. F. H. Borcherdt and Mr. E. B. Wilson will demonstrate the manufacture of a pure barley malt extract; also the preparation of Dr. Keller's Malt Soup from Borcherdt's Malt Soup Extract will be shown. Borcherdt's Malt-Olive with hypophosphites will be exhibited and samples of these products will be available.

BURROUGHS WELLCOME & CO., New York. Space 14. An exhibit of their pharmaceutical preparations issued under their various trade-marks. Among these will be included "Tabloid," "Solo.d," "Vaporole" products, "Tabloid" brand medicinal animal substances, "Wellcome" brand Sera and Vaccines and an assortment of "Tabloid" brand medicine cases, suitable for every need the physician has in this direction.

FAIRCHILD BROS. & FOSTER, New York City. Space 58. This exhibit will consist of standardized products of the gastric and pancreas glands; special enzyme products—trypsin, amylopsin, etc.; bile salts; a colonic food; culture of the *Bacillus bulgaricus*—all approved and interesting.

H. K. MULFORD COMPANY, Philadelphia. Spaces 45-46. A scientific exhibit of bacterins, serums and vaccines. Showing methods of production with working bulletins compiled from the latest information on the special subjects treated. This is not only designed to be an interesting but a scientific exhibit to aid every practitioner.

PULVOLA CHEMICAL CO., Jersey City, N. J. Space 70. See their unique tumbler test demonstration, showing (with comparisons) the non-absorbent quality of Pulvola. "The Doctors' Baby Powder" and general toilet, face and foot powder; also of Dolomol, the dry ointment or stearated dusting powder, in 20 medications on a neutral base (magnesia, not zinc), absolutely impervious and bland. See their white ichthyol, odorless, dry, impalpable, adherent, non-crusting—the ideal dressing for chronic leg ulcers, bed sores, etc.



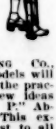
G. D. SEARLE & CO., Chicago. Space 31. The interesting feature of this exhibit will be the display of specially prepared, uniformly soluble hypodermic tablets.

E. R. SQUIBB & SONS, New York. Space 80. Will give a demonstration of the disintegrability of their tablets and also exhibit a representative collection of their high quality chemicals and pharmaceuticals, together with some of the impurities removed from the regular U. S. P. grade of products in the process of purification necessary to bring the articles up to the Squibb standard.

HENRY K. WAMPOLE & CO., Inc., Philadelphia. Space 53. A complete line of pharmaceutical products will be displayed by this firm, including those prominently identified with U. S. P. and N. F. standards. Pulverous pills, fluidextracts, elixirs, syrups, solutions, tinctures, ointments, soft elastic and hard gelatin capsules, effervescent salts, lozenges, compressed and hypodermic tablets will be aptly displayed in illustration of the advanced achievements to-day of the manufacturing pharmaceutist.

Artificial Limbs and Supportive Appliances

AMBULATORY PNEUMATIC SPLINT M'F'G CO., Chicago. Space 76. At this booth a practical scientific demonstration of the application and use of the Ambulatory Pneumatic Splint will be given. It will be shown how this splint secures good bony union, with the greatest comfort. "Ambumatic" washable abdominal supporters and braces will also be shown.



BOLES MANUFACTURING CO., Omaha. Space 82. Models will be used to demonstrate the practicability and many new ideas carried out in the "B. P." Abdominal Supporters. This exhibit will be of interest to all physicians as special explanations will be made for their benefit regarding the important points in the manufacture and adjustment of a perfect supporter.

ANATOMIK FOOTWEAR CO., New York. Space 3. A demonstration showing why many physicians prescribe shoes with this trademark as being the only shoes that satisfy the functional needs of the feet, correcting and preventing foot troubles (from plain foot-ache to bad flat-foot), and offering for the normal foot the comfort that is associated with its unimpeded natural action.

CARNES ARTIFICIAL LIMB CO., Kansas City, Mo. Space 59. A demonstration of mechanical artificial arms and hands by people wearing them for amputations both above and below the elbow. This should be of great interest to surgeons, especially as the artificial arm demonstrated has nearly all of the movements of the natural arm and hand, such as bending elbow, automatic opening and closing fingers, and rotating and flexing wrist.

Mineral Waters

APOLLINARIS AGENCY COMPANY. Space 34. Apollinaris water, which is mildly alkaline and naturally effervescent, will be exhibited. It is bottled only at the Apollinaris spring, Neuenahr, Germany, and only with its own natural gas, as stated on the label. The same company will also exhibit "Apenta," the Hungarian natural aperient water, which is noted for its well proportioned content of magnesium sulphate and sodium sulphate.

MYERS-DILLON DRUG CO., Omaha, Neb. Space 66. Will exhibit Mountain Valley Water. It is recommended as an eliminant and in the treatment of auto-intoxications. The complete analysis of Mountain Valley Water has been carefully made by competent chemists. Physicians will be given an opportunity to examine this analysis and decide for themselves as to the special indications for the use of water.

Miscellaneous

DEIMEL LINEN-MESH SYSTEM CO., New York. Space 13. Physicians will have an opportunity to inspect the Dr. Deimel linen-mesh underwear. The different styles and sizes of the garments for men, women and children will be displayed.

NATIONAL PATHOLOGICAL LABORATORY, Chicago. Space 30. Complete medical analyses, including the \$5 five antigen Wassermann, will be demonstrated. Meet our serologist, state suite, parlor floor, Radisson Hotel, for information regarding all complement-fixation tests and general laboratory work. GRAY OIL syringes will be displayed and instructions given for their use.

SOUTHERN ASEPTIC COTTON CO., Chattanooga, Tenn. Spaces 100 and 101. This exhibit will be interesting and instructive. Aseptic cartons will be shown, which are so prepared for the market that a portion of the absorbent cotton and surgical gauze can be drawn through a slot and cut off, leaving the remainder protected from septic contamination.

THE H. W. WILSON CO., Minneapolis. We will be there with a stock of maroon and gold bunting, souvenirs of the University of Minnesota, post-cards of all the medical buildings. Our store, known as the "University Book Store," is located at 1401 University Ave. S.E.—opposite the entrance to the University campus.